

Single-Family Rental Research

Performance Summary Covering All Morningstar-Rated Securitizations

July 2018

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Introduction

The blended rent change for single borrower, single-family rental securitizations rated by Morningstar Credit Ratings, LLC increased for the sixth consecutive month by 4.9% in June, compared with a revised 4.7% rise in May. While the change in rents reflected in RentRange continues to trail the rent changes in securitizations, the RentRange rents for three- and four-bedroom properties did increase by 1.5% and 1.1%, respectively, after being flat in May. The average vacancy rate increased to 4.3% in June from a revised 4.0% in May. The increase in vacancy was likely due to a corresponding increase in lease expirations, following a seasonal trend of higher lease expirations and vacancies in the spring and summer months. The average retention rate for expiring leases declined 180 basis points, but remains strong at 78.2% as of May, the latest month available, from a revised 80.0% in April. Among the top 20 metropolitan statistical areas, the Denver-Aurora MSA had the highest vacancy rate at 7.1%, up from a revised 5.6% in May, followed by Sarasota-Bradenton-Venice, Florida at 6.1% and Fort Lauderdale, Florida at 6.0%. The Phoenix MSA continued to experience the highest blended rent growth of 7.1%, while the Las Vegas; Los Angeles; Orlando, Florida; and Riverside-San Bernardino, California MSAs all experienced rent growth over 6.0%. The Sarasota-Bradenton-Venice, Florida MSA is the only market to experience rent growth under 3.0%. IH 2018-SFR2 is now reporting data and was added to this month's report. CSH 2016-1 paid down its principal balance by \$200.1 million to \$327.8 million from \$527.9 million. The July Single-Family Rental Performance Summary includes 24 single-borrower deals with over 87,200 properties.

According to the California Department of Forestry and Fire Protection, there are approximately 18 wildfires burning currently in California ranging in containment from 29% to 100%. Most of the fires are predominantly in rural areas; there are no securitized single-family rental properties affected by the Carr Fire in Shasta and Trinity counties and the Ranch/Mendocino Complex Fires in

Colusa, Lake, and Mendocino counties. Morningstar will continue to monitor the Holy Fire in Orange County, the Valley Fire in San Bernardino County, and other California wildfires to see if there is any impact on single-family rental securitizations.

Morningstar publishes our performance summary to provide market participants detailed property-level information on each single-family rental securitization that Morningstar has rated. The data below summarizes issuer-reported property-level information through June. Page 6 includes a summary of the multiborrower transactions. For deals seasoned at least one year, we provide Morningstar Surveillance Analysis reports, available on our website, www.morningstarcreditratings.com.

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Single-Borrower Performance

Lease expirations remained at 8.0% for the second consecutive month in June, up from a revised 7.1% in April, following a seasonal trend of increasing in the spring and summer months. The increase in lease expirations corresponds with a 30-basis-point increase in the vacancy rate. HPA 2016-2 continued to have the highest lease expiration rate at 21.8% in June, while also having the highest vacancy rate at 6.6%, followed by CSH 2016-2 at 6.2% and SWH 2017-1 at 6.0%. The average retention rate on full-term leases remained strong at 78.2% in May, the latest month for which data is available, down from a revised 80.0% in April. Five securitizations have retention rates below 75%, while six transactions had a retention rate of 80.0% or higher. The overall turnover rate increased to 3.5% in May, the latest month for which data is available, from 2.7% in April. The average delinquency rate decreased 10 basis points to 0.5% in June, with three transactions reporting delinquency rates of 1.0% or greater. AMSR 2016-SFR1 reported the highest delinquency rate, at 1.7% in June, down from a revised 1.8% in May. Please note that any review of delinquency should be viewed within the context of the delinquency definitions in Table 7.

Rents rose 4.9% in May, the sixth consecutive month of higher rent increases. Chart 1 shows that the rent gains for securitized properties increased above their RentRange benchmarks, which increased slightly in June from a relatively flat May. The RentRange benchmarks track the year-over-year change on three- and four-bedroom median rents, weighted by MSA to match the geographic concentration of the Morningstar database.

Chart 2 shows the rental change of renewals versus vacant-to-occupied properties. For May, the latest month for which data is available, the rent change for renewal properties increased 4.4% and vacant-to-occupied properties increased by 5.1%, up from a revised 4.6% in April. May is the fifth consecutive month of increasing rent change for vacant-to-occupied rent changes. Chart 3 shows that the average contractual rents by MSA have been largely in line with or slightly higher than their property-level RentRange estimates, with the exception of Houston, where contractual rents were slightly lower than the RentRange average. Chart 4 shows the MSA-level blended rent change. MSAs with rent changes above the 4.9% average are in blue, while those below are in red. The size of the circle indicates the percentage of properties by count from a given MSA in Morningstar's database. Table 3 shows the MSA-level blended rent change for the past 12 months.

Table 11b shows the percentage of loans rented out under a month-to-month lease. AMSR 2016-SFR1 MTM leases declined slightly to 17.7% of its portfolio, but still rank the highest. TAH 2016-SFR1 has the second-highest percentage of MTM leases with 7.4% in June, down from 8.1% in May.

Multiborrower Performance

With the addition of CAF 2018-1, there have been nine multiborrower transactions. As of the most recent remittance report, these transactions are secured by 871 total loans. The number of loans 30-59 days delinquent increased by one to 10, while the number of loans 60-89 days delinquent decreased to three from six, and the loans over 90 days delinquent remained unchanged at 16. Loans in foreclosure also remained the same at five, and loans in special servicing decreased by one to 29. FKL 2015-SFR1 had six loans pay off, bringing the total number of loans securing the transaction down to eight, while the outstanding principal balance was paid down by over \$82 million to about \$75.8 million from about \$157.8 million.

Table 1 – Multiborrower Loan Performance by Percentage of Balance

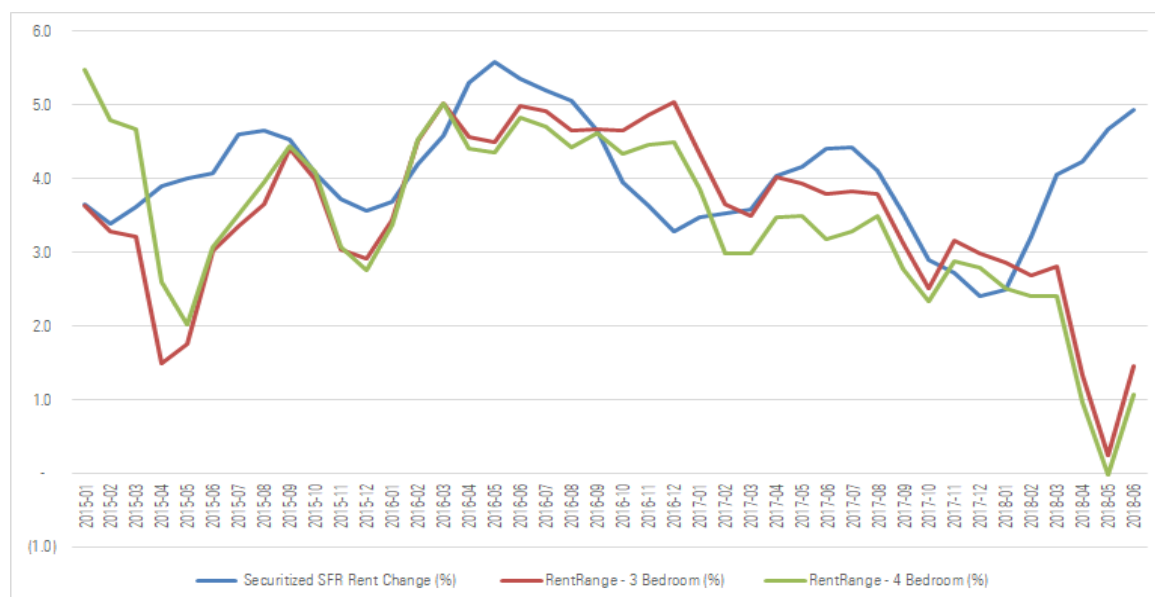
| | 30-59 Delinquent | 60-89 Delinquent | 90+ Delinquent | Foreclosure | Real Estate Owned | Special Servicing |
|---------------|---------------------|---------------------|-------------------|-------------|----------------------|----------------------|
| B2R 2015-1 | 0.00 | 0.20 | 0.26 | 0.20 | 0.00 | 0.60 |
| FKL 2015-SFR1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CAF 2015-1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.74 |
| B2R 2015-2 | 0.27 | 0.32 | 1.09 | 0.22 | 0.00 | 1.44 |
| CAF 2016-1 | 1.91 | 0.00 | 0.00 | 0.00 | 0.00 | 1.35 |
| B2R 2016-1 | 1.22 | 0.00 | 2.21 | 0.25 | 0.00 | 2.89 |
| CAF 2016-2 | 0.87 | 0.00 | 3.11 | 2.79 | 0.00 | 4.23 |
| CAF 2017-1 | 0.00 | 0.00 | 0.72 | 0.00 | 0.00 | 1.45 |
| CAF 2018-1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Table 2 – Multiborrower Loan Performance by Loan Count

| | Total Loans | 30-59 Delinquent | 60-89 Delinquent | 90+ Delinquent | Foreclosure | Real Estate Owned | Special Servicing |
|---------------|-------------|---------------------|---------------------|-------------------|-------------|----------------------|----------------------|
| B2R 2015-1 | 125 | 0 | 1 | 1 | 1 | 0 | 3 |
| FKL 2015-SFR1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| CAF 2015-1 | 54 | 0 | 0 | 0 | 0 | 0 | 1 |
| B2R 2015-2 | 187 | 1 | 2 | 5 | 1 | 0 | 7 |
| CAF 2016-1 | 72 | 3 | 0 | 0 | 0 | 0 | 1 |
| B2R 2016-1 | 154 | 5 | 0 | 5 | 1 | 0 | 9 |
| CAF 2016-2 | 68 | 1 | 0 | 3 | 2 | 0 | 5 |
| CAF 2017-1 | 86 | 0 | 0 | 2 | 0 | 0 | 3 |
| CAF 2018-1 | 117 | 0 | 0 | 0 | 0 | 0 | 0 |
| Overall | 871 | 10 | 3 | 16 | 5 | 0 | 29 |

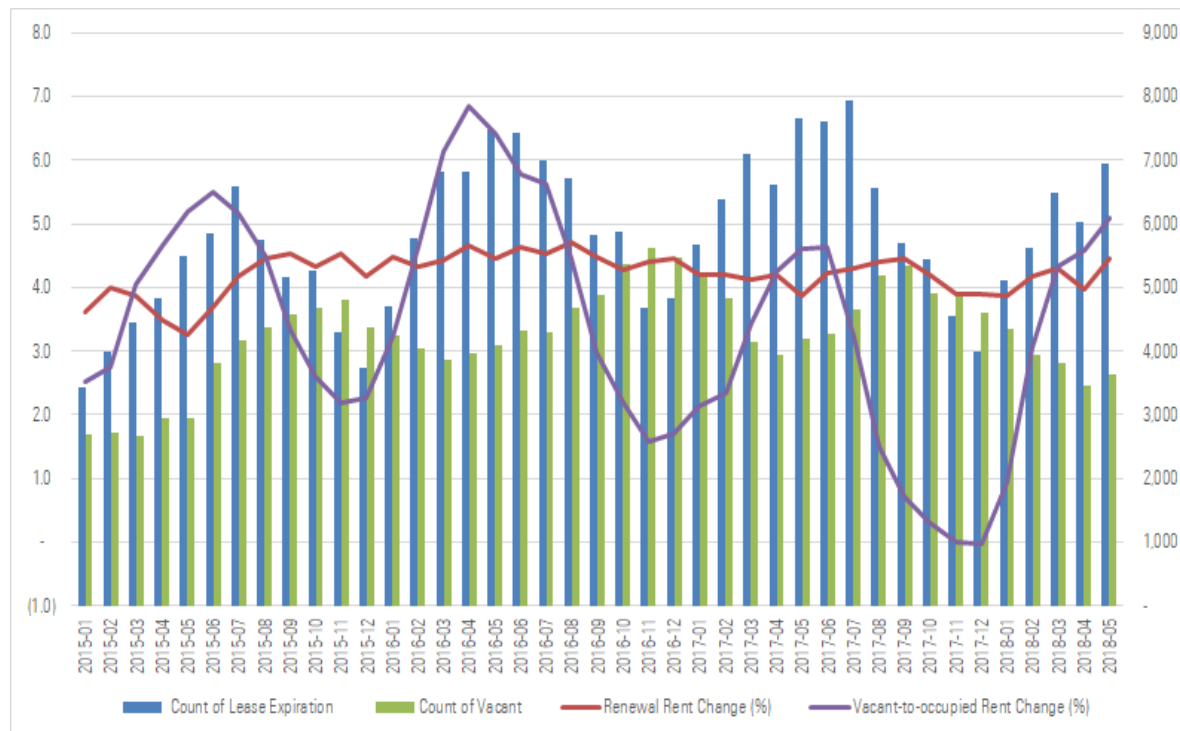
Single-Borrower Charts and Tables

Chart 1 – Single-Family Rental Rent Change Versus RentRange Year-Over-Year Rent Change



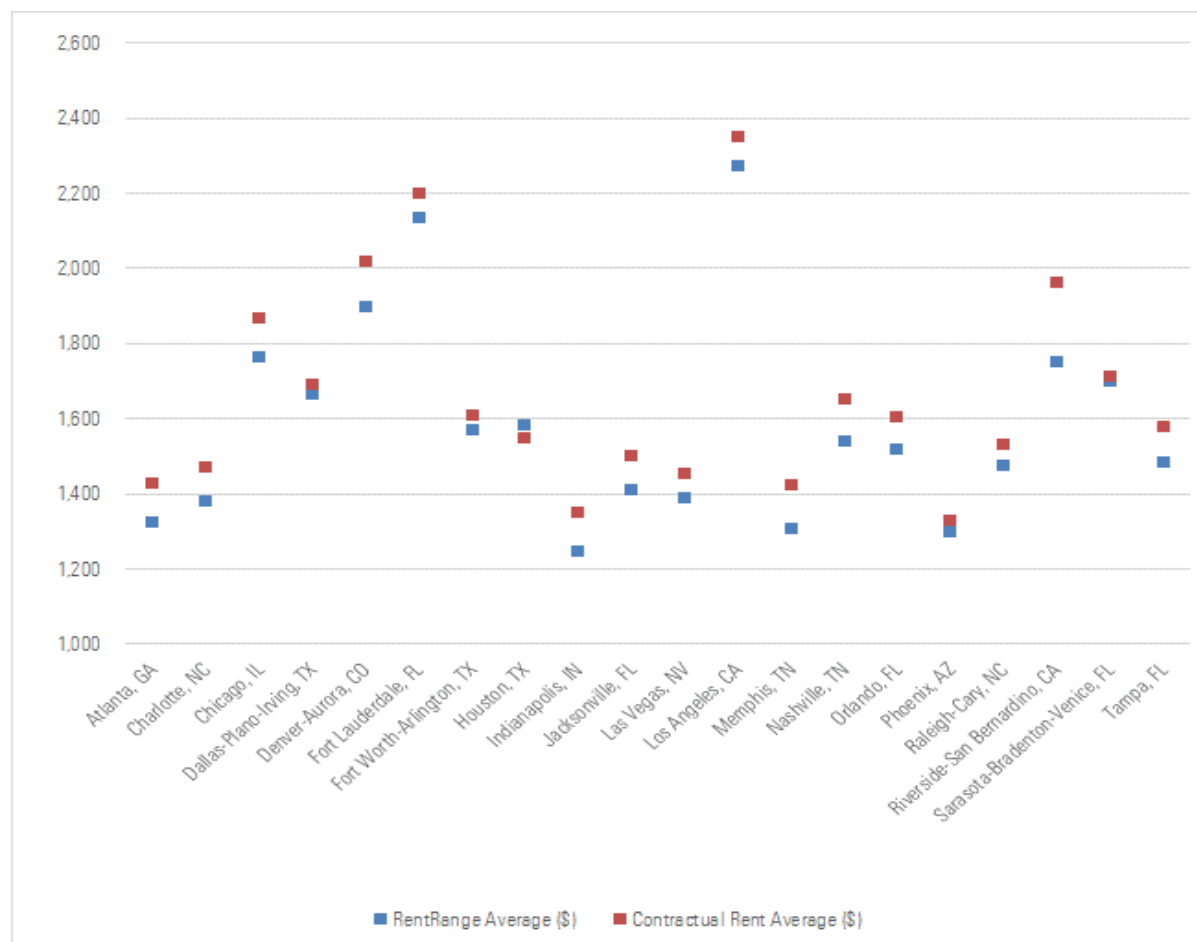
Sources: Morningstar Credit Ratings, LLC; RentRange

Chart 2 – Rental Changes for Renewals Versus Vacant-to-Occupied Properties



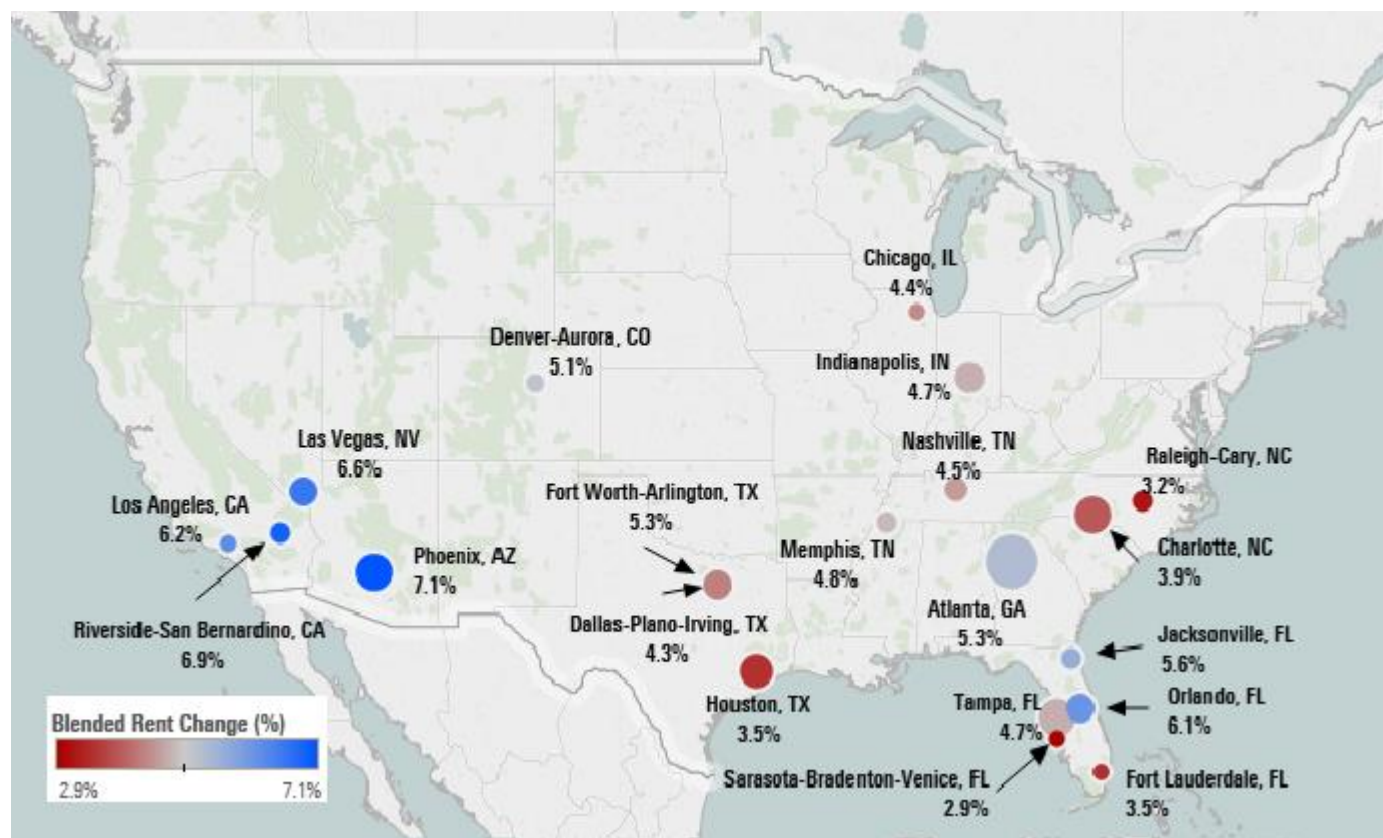
Source: Morningstar Credit Ratings, LLC

Chart 3 – June Average Contractual Rent Versus Property-Level RentRange Estimate by MSA



Sources: Morningstar Credit Ratings, LLC; RentRange

Chart 4 – MSA-Level Blended Rent Change*



Sources: Morningstar Credit Ratings, LLC; Tableau Software

*The size of the circles represents the total percentage (by count) of properties in each MSA, ranging from 1.34% to 14.17%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA.

Table 3 – Blended Rent Change (by Percentage) - Top MSAs

| | | Year 2017 | | | | | Year 2018 | | | | | | |
|-------------------------------|--|-----------|-----|------|------|------|-----------|------|-----|-----|-----|-----|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| Atlanta, GA | | 4.9 | 4.6 | 4.4 | 4.3 | 3.6 | 3.5 | 3.1 | 3.9 | 5.1 | 4.8 | 5.3 | 5.3 |
| Charlotte, NC | | 4.1 | 3.2 | 3.0 | 2.7 | 1.7 | 1.0 | 1.4 | 2.5 | 3.4 | 3.1 | 4.0 | 3.9 |
| Chicago, IL | | 2.2 | 2.1 | 0.8 | 0.8 | -0.2 | -0.6 | 0.7 | 1.3 | 1.6 | 3.0 | 4.3 | 4.4 |
| Dallas-Plano-Irving, TX | | 5.2 | 4.3 | 4.1 | 2.8 | 2.8 | 2.4 | 2.5 | 3.2 | 3.6 | 3.9 | 4.0 | 4.3 |
| Denver-Aurora, CO | | 6.2 | 6.2 | 4.2 | 1.7 | 2.4 | 3.8 | 1.6 | 4.3 | 5.7 | 4.9 | 4.6 | 5.1 |
| Fort Lauderdale, FL | | 2.5 | 1.8 | 2.2 | 2.2 | 1.2 | 1.7 | 1.8 | 2.5 | 2.8 | 2.9 | 3.8 | 3.5 |
| Fort Worth-Arlington, TX | | 4.6 | 4.5 | 4.4 | 3.3 | 3.2 | 2.7 | 2.3 | 3.2 | 4.2 | 4.1 | 4.1 | 5.3 |
| Houston, TX | | 1.5 | 1.6 | -0.8 | -0.4 | -0.6 | 0.0 | 1.4 | 1.4 | 3.1 | 3.6 | 3.3 | 3.5 |
| Indianapolis, IN | | 3.0 | 3.1 | 2.0 | 1.8 | 0.4 | 0.2 | -0.1 | 2.9 | 3.3 | 3.3 | 4.2 | 4.7 |
| Jacksonville, FL | | 4.3 | 3.5 | 3.7 | 3.3 | 2.6 | 2.3 | 3.0 | 3.3 | 4.1 | 5.2 | 5.5 | 5.6 |
| Las Vegas, NV | | 5.4 | 5.9 | 5.1 | 3.1 | 4.5 | 4.0 | 4.2 | 5.1 | 5.6 | 5.2 | 6.2 | 6.6 |
| Los Angeles, CA | | 8.0 | 7.5 | 6.3 | 6.5 | 6.0 | 6.4 | 6.3 | 4.6 | 5.7 | 6.0 | 6.3 | 6.2 |
| Memphis, TN | | 2.3 | 2.7 | 2.4 | 1.0 | 0.2 | -0.1 | 0.9 | 1.5 | 3.2 | 3.9 | 4.4 | 4.8 |
| Nashville, TN | | 4.8 | 4.0 | 3.7 | 3.3 | 2.2 | 1.1 | 1.7 | 1.9 | 2.8 | 3.1 | 4.6 | 4.5 |
| Orlando, FL | | 5.2 | 4.7 | 4.1 | 3.2 | 4.0 | 4.0 | 3.2 | 4.9 | 4.9 | 5.1 | 5.3 | 6.1 |
| Phoenix, AZ | | 6.8 | 6.1 | 5.5 | 4.8 | 5.0 | 4.1 | 4.1 | 5.0 | 6.3 | 6.4 | 6.2 | 7.1 |
| Raleigh-Cary, NC | | 3.7 | 3.3 | 3.4 | 2.6 | 2.1 | 0.5 | 1.3 | 1.6 | 2.4 | 3.0 | 3.9 | 3.2 |
| Riverside-San Bernardino, CA | | 5.9 | 5.2 | 5.1 | 5.1 | 5.0 | 4.9 | 4.5 | 4.6 | 4.9 | 5.2 | 5.3 | 6.9 |
| Sarasota-Bradenton-Venice, FL | | 2.1 | 1.4 | 1.0 | 0.4 | 1.0 | 0.4 | 0.8 | 2.0 | 2.9 | 2.9 | 3.4 | 2.9 |
| Tampa, FL | | 3.6 | 3.2 | 2.6 | 1.7 | 2.4 | 2.1 | 2.1 | 2.9 | 3.7 | 4.3 | 4.3 | 4.7 |

Table 4a – Month-End Vacancy (by Count)

| | | Year 2017 | | | | | | Year 2018 | | | | | | Count |
|----------------|--|-----------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|--------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | |
| AH4R 2014-SFR2 | | 209 | 230 | 251 | 248 | 235 | 215 | 233 | 217 | 186 | 166 | 128 | 134 | 4,481 |
| AH4R 2014-SFR3 | | 234 | 310 | 298 | 317 | 299 | 284 | 266 | 265 | 243 | 227 | 200 | 208 | 4,499 |
| AH4R 2015-SFR1 | | 198 | 243 | 282 | 312 | 331 | 304 | 309 | 294 | 253 | 256 | 198 | 159 | 4,634 |
| AH4R 2015-SFR2 | | 267 | 253 | 268 | 276 | 252 | 238 | 235 | 217 | 229 | 248 | 234 | 202 | 4,123 |
| AMSR 2016-SFR1 | | 355 | 335 | 350 | 339 | 366 | 375 | 397 | 328 | 280 | 244 | 215 | 250 | 4,262 |
| CAH 2015-1 | | 239 | 261 | 225 | 214 | 226 | 230 | 176 | 165 | 171 | 153 | 146 | 223 | 3,758 |
| CSH 2016-1 | | 194 | 215 | 207 | 214 | 207 | 207 | 202 | 180 | 189 | 180 | 196 | 206 | 3,516 |
| CSH 2016-2 | | 241 | 266 | 241 | 230 | 254 | 257 | 256 | 229 | 214 | 217 | 223 | 244 | 3,955 |
| HPA 2016-2 | | 80 | 63 | 48 | 36 | 42 | 46 | 52 | 45 | 41 | 53 | 75 | 86 | 1,301 |
| HPA 2017-1 | | 19 | 26 | 36 | 50 | 64 | 57 | 53 | 34 | 39 | 46 | 49 | 42 | 1,345 |
| IH 2017-SFR2 | | | | | | | | 177 | 158 | 136 | 124 | 141 | 179 | 4,411 |
| IH 2018-SFR1 | | | | | | | | | | 131 | 131 | 193 | 230 | 4,289 |
| IH 2018-SFR2 | | | | | | | | | | | | | 248 | 5,610 |
| PRD 2015-SFR2 | | 130 | 149 | 180 | 197 | 148 | 113 | 93 | 95 | 95 | 95 | 95 | 117 | 3,287 |
| PRD 2015-SFR3 | | 222 | 269 | 259 | 245 | 206 | 160 | 114 | 83 | 80 | 87 | 107 | 140 | 3,150 |
| PRD 2016-SFR1 | | 279 | 314 | 311 | 304 | 277 | 244 | 227 | 215 | 185 | 201 | 197 | 200 | 5,549 |
| PRD 2016-SFR2 | | 181 | 282 | 265 | 238 | 162 | 122 | 104 | 104 | 105 | 98 | 109 | 134 | 3,742 |
| PRD 2017-SFR1 | | | 131 | 187 | 203 | 183 | 150 | 94 | 67 | 60 | 60 | 71 | 90 | 2,708 |
| PRD 2018-SFR1 | | | | | | | | | | | 19 | 18 | 44 | 2,113 |
| SWH 2017-1 | | | | | | 184 | 209 | 219 | 238 | 239 | 231 | 233 | 265 | 4,432 |
| TAH 2016-SFR1 | | 187 | 169 | 199 | 186 | 178 | 156 | 161 | 150 | 162 | 136 | 167 | 156 | 3,436 |
| TAH 2017-SFR1 | | | | 173 | 162 | 164 | 146 | 152 | 145 | 124 | 84 | 109 | 76 | 3,480 |
| TAH 2017-SFR2 | | | | | | | | 109 | 93 | 94 | 109 | 96 | 79 | 2,621 |
| TAH 2018-SFR1 | | | | | | | | | | | | 104 | 80 | 2,509 |
| Overall SFR | | 3,035 | 3,516 | 3,780 | 3,771 | 3,778 | 3,513 | 3,629 | 3,322 | 3,256 | 3,165 | 3,304 | 3,792 | 87,211 |

Table 4b – Month-End Vacancy (by Percentage)

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|----------------|--|-----------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 4.7 | 5.1 | 5.6 | 5.5 | 5.2 | 4.8 | 5.2 | 4.8 | 4.2 | 3.7 | 2.9 | 3.0 |
| AH4R 2014-SFR3 | | 5.2 | 6.9 | 6.6 | 7.0 | 6.6 | 6.3 | 5.9 | 5.9 | 5.4 | 5.0 | 4.4 | 4.6 |
| AH4R 2015-SFR1 | | 4.2 | 5.2 | 6.1 | 6.7 | 7.1 | 6.5 | 6.6 | 6.3 | 5.4 | 5.5 | 4.3 | 3.4 |
| AH4R 2015-SFR2 | | 6.5 | 6.1 | 6.5 | 6.7 | 6.1 | 5.8 | 5.7 | 5.3 | 5.6 | 6.0 | 5.7 | 4.9 |
| AMSR 2016-SFR1 | | 8.3 | 7.9 | 8.2 | 8.0 | 8.6 | 8.8 | 9.3 | 7.7 | 6.6 | 5.7 | 5.0 | 5.9 |
| CAH 2015-1 | | 6.2 | 6.8 | 5.9 | 5.6 | 6.0 | 6.1 | 4.6 | 4.4 | 4.5 | 4.1 | 3.9 | 5.9 |
| CSH 2016-1 | | 5.4 | 6.0 | 5.8 | 6.0 | 5.8 | 5.8 | 5.7 | 5.1 | 5.3 | 5.1 | 5.6 | 5.9 |
| CSH 2016-2 | | 6.0 | 6.7 | 6.0 | 5.8 | 6.4 | 6.4 | 6.4 | 5.7 | 5.4 | 5.5 | 5.6 | 6.2 |
| HPA 2016-2 | | 6.0 | 4.7 | 3.6 | 2.7 | 3.1 | 3.4 | 3.9 | 3.4 | 3.1 | 4.0 | 5.7 | 6.6 |
| HPA 2017-1 | | 1.4 | 1.9 | 2.6 | 3.6 | 4.7 | 4.2 | 3.9 | 2.5 | 2.9 | 3.4 | 3.6 | 3.1 |
| IH 2017-SFR2 | | | | | | | | 4.0 | 3.6 | 3.1 | 2.8 | 3.2 | 4.1 |
| IH 2018-SFR1 | | | | | | | | | | 3.1 | 3.1 | 4.5 | 5.4 |
| IH 2018-SFR2 | | | | | | | | | | | | | 4.4 |
| PRD 2015-SFR2 | | 3.9 | 4.5 | 5.5 | 6.0 | 4.5 | 3.4 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 3.6 |
| PRD 2015-SFR3 | | 7.0 | 8.5 | 8.2 | 7.8 | 6.5 | 5.1 | 3.6 | 2.6 | 2.5 | 2.8 | 3.4 | 4.4 |
| PRD 2016-SFR1 | | 5.0 | 5.6 | 5.6 | 5.5 | 5.0 | 4.4 | 4.1 | 3.9 | 3.3 | 3.6 | 3.6 | 3.6 |
| PRD 2016-SFR2 | | 4.8 | 7.5 | 7.1 | 6.4 | 4.3 | 3.3 | 2.8 | 2.8 | 2.8 | 2.6 | 2.9 | 3.6 |
| PRD 2017-SFR1 | | | 4.8 | 6.9 | 7.5 | 6.8 | 5.5 | 3.5 | 2.5 | 2.2 | 2.2 | 2.6 | 3.3 |
| PRD 2018-SFR1 | | | | | | | | | | | 0.9 | 0.9 | 2.1 |
| SWH 2017-1 | | | | | | 4.2 | 4.7 | 4.9 | 5.4 | 5.4 | 5.2 | 5.3 | 6.0 |
| TAH 2016-SFR1 | | 5.4 | 4.9 | 5.8 | 5.4 | 5.2 | 4.5 | 4.7 | 4.4 | 4.7 | 4.0 | 4.9 | 4.5 |
| TAH 2017-SFR1 | | | | 5.0 | 4.7 | 4.7 | 4.2 | 4.4 | 4.2 | 3.6 | 2.4 | 3.1 | 2.2 |
| TAH 2017-SFR2 | | | | | | | | 4.2 | 3.5 | 3.6 | 4.2 | 3.7 | 3.0 |
| TAH 2018-SFR1 | | | | | | | | | | | | 4.1 | 3.2 |
| Overall SFR | | 5.5 | 6.1 | 6.1 | 6.1 | 5.7 | 5.3 | 5.0 | 4.6 | 4.2 | 4.0 | 4.0 | 4.3 |

Table 4c – Month-End Vacancy (by Percentage) – Top MSAs

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|-------------------------------|--|-----------|-----|-----|------|-----|-----|-----------|-----|-----|-----|-----|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| Atlanta, GA | | 4.4 | 4.9 | 4.8 | 5.0 | 4.7 | 4.4 | 4.6 | 4.6 | 4.0 | 4.2 | 4.1 | 4.3 |
| Charlotte, NC | | 5.2 | 5.8 | 6.6 | 6.6 | 6.1 | 5.8 | 5.8 | 5.5 | 5.4 | 4.4 | 4.4 | 4.5 |
| Chicago, IL | | 4.8 | 5.0 | 5.0 | 5.7 | 5.2 | 4.5 | 4.5 | 4.6 | 4.3 | 4.9 | 4.8 | 3.4 |
| Dallas-Plano-Irving, TX | | 5.0 | 5.6 | 5.5 | 5.5 | 4.9 | 5.3 | 5.0 | 4.5 | 4.6 | 4.3 | 4.1 | 4.6 |
| Denver-Aurora, CO | | 5.8 | 6.5 | 5.4 | 4.9 | 4.7 | 5.4 | 4.8 | 5.0 | 4.0 | 4.0 | 5.6 | 7.1 |
| Fort Lauderdale, FL | | 6.3 | 6.3 | 6.7 | 6.8 | 6.1 | 5.8 | 5.1 | 4.2 | 5.0 | 4.9 | 6.1 | 6.0 |
| Fort Worth-Arlington, TX | | 5.2 | 5.0 | 4.8 | 4.9 | 5.9 | 5.2 | 5.0 | 4.3 | 4.0 | 4.0 | 4.0 | 4.9 |
| Houston, TX | | 7.9 | 9.2 | 9.8 | 10.0 | 9.4 | 8.8 | 8.8 | 7.3 | 6.4 | 6.3 | 5.9 | 5.9 |
| Indianapolis, IN | | 6.3 | 6.7 | 6.7 | 6.2 | 5.6 | 5.3 | 4.4 | 5.1 | 4.3 | 4.1 | 3.0 | 3.9 |
| Jacksonville, FL | | 4.4 | 5.1 | 6.4 | 5.8 | 5.2 | 4.5 | 4.6 | 4.0 | 3.2 | 2.6 | 3.4 | 3.5 |
| Las Vegas, NV | | 4.3 | 4.4 | 4.5 | 3.8 | 3.5 | 3.6 | 2.6 | 2.5 | 2.8 | 2.2 | 3.0 | 3.1 |
| Los Angeles, CA | | 5.1 | 4.6 | 4.6 | 4.9 | 5.2 | 4.3 | 5.0 | 3.7 | 3.2 | 3.9 | 4.0 | 5.5 |
| Memphis, TN | | 6.3 | 6.7 | 7.3 | 7.3 | 6.2 | 5.3 | 5.2 | 4.3 | 4.0 | 3.9 | 3.5 | 3.7 |
| Nashville, TN | | 6.2 | 7.1 | 7.1 | 7.6 | 8.0 | 7.5 | 7.3 | 5.9 | 4.7 | 4.1 | 3.6 | 4.0 |
| Orlando, FL | | 4.5 | 4.8 | 4.8 | 4.5 | 3.8 | 3.5 | 3.3 | 3.1 | 3.6 | 2.6 | 2.9 | 3.7 |
| Phoenix, AZ | | 5.2 | 5.5 | 4.5 | 4.8 | 4.8 | 4.0 | 3.2 | 3.2 | 2.7 | 2.2 | 2.7 | 3.2 |
| Raleigh-Cary, NC | | 4.9 | 6.1 | 7.1 | 7.1 | 6.8 | 5.6 | 5.8 | 5.1 | 5.2 | 4.7 | 3.9 | 4.0 |
| Riverside-San Bernardino, CA | | 3.3 | 3.6 | 3.4 | 3.8 | 3.7 | 4.3 | 3.8 | 4.1 | 3.7 | 3.5 | 3.7 | 4.1 |
| Sarasota-Bradenton-Venice, FL | | 7.0 | 7.7 | 7.7 | 7.0 | 7.3 | 5.9 | 4.5 | 4.6 | 4.8 | 5.3 | 6.3 | 6.1 |
| Tampa, FL | | 5.1 | 6.3 | 6.7 | 6.3 | 5.9 | 5.0 | 4.5 | 4.0 | 4.0 | 4.1 | 4.4 | 4.7 |

Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)*



Sources: Morningstar Credit Ratings, LLC; Tableau Software

*The size of the circles represents the past three months of lease expirations by count as a percentage of each MSA, ranging from 19.75% to 29.71%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA.

Table 5a – Lease Expiration (by Count)

| | | Year 2017 | | | | | | Year 2018 | | | | | | Total Count |
|----------------|--|-----------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-------------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | |
| AH4R 2014-SFR2 | | 371 | 331 | 264 | 201 | 189 | 161 | 310 | 346 | 368 | 329 | 423 | 411 | 4,481 |
| AH4R 2014-SFR3 | | 448 | 416 | 265 | 241 | 160 | 171 | 348 | 332 | 311 | 280 | 361 | 410 | 4,499 |
| AH4R 2015-SFR1 | | 488 | 423 | 336 | 313 | 251 | 235 | 360 | 354 | 291 | 247 | 278 | 347 | 4,634 |
| AH4R 2015-SFR2 | | 355 | 214 | 159 | 132 | 133 | 151 | 238 | 310 | 397 | 315 | 438 | 425 | 4,123 |
| AMSR 2016-SFR1 | | 281 | 225 | 186 | 193 | 178 | 167 | 178 | 271 | 300 | 320 | 361 | 323 | 4,262 |
| CAH 2015-1 | | 393 | 378 | 298 | 287 | 266 | 175 | 215 | 207 | 219 | 251 | 319 | 374 | 3,758 |
| CSH 2016-1 | | 340 | 273 | 264 | 234 | 191 | 170 | 197 | 220 | 276 | 303 | 308 | 347 | 3,516 |
| CSH 2016-2 | | 300 | 287 | 230 | 243 | 237 | 167 | 232 | 257 | 306 | 325 | 392 | 354 | 3,955 |
| HPA 2016-2 | | 179 | 11 | 5 | 6 | 10 | 16 | 14 | 12 | 105 | 155 | 235 | 284 | 1,301 |
| HPA 2017-1 | | 87 | 141 | 118 | 186 | 149 | 114 | 91 | 74 | 110 | 114 | 73 | 17 | 1,345 |
| IH 2017-SFR2 | | | | | | | | 242 | 247 | 292 | 294 | 330 | 391 | 4,411 |
| IH 2018-SFR1 | | | | | | | | | | 311 | 346 | 323 | 363 | 4,289 |
| IH 2018-SFR2 | | | | | | | | | | | | | 331 | 5,610 |
| PRD 2015-SFR2 | | 192 | 118 | 179 | 221 | 185 | 142 | 189 | 234 | 260 | 307 | 324 | 216 | 3,287 |
| PRD 2015-SFR3 | | 525 | 284 | 216 | 157 | 93 | 76 | 81 | 120 | 108 | 187 | 292 | 287 | 3,150 |
| PRD 2016-SFR1 | | 358 | 176 | 216 | 322 | 230 | 286 | 330 | 426 | 480 | 567 | 468 | 368 | 5,549 |
| PRD 2016-SFR2 | | 639 | 426 | 270 | 209 | 127 | 113 | 150 | 145 | 148 | 165 | 271 | 333 | 3,742 |
| PRD 2017-SFR1 | | | 112 | 279 | 381 | 229 | 197 | 162 | 133 | 127 | 89 | 136 | 145 | 2,708 |
| PRD 2018-SFR1 | | | | | | | | | | | 54 | 52 | 97 | 2,113 |
| SWH 2017-1 | | | | | | 210 | 204 | 284 | 385 | 418 | 475 | 442 | 381 | 4,432 |
| TAH 2016-SFR1 | | 301 | 238 | 171 | 221 | 107 | 92 | 124 | 159 | 197 | 235 | 225 | 260 | 3,436 |
| TAH 2017-SFR1 | | | | 276 | 261 | 206 | 171 | 241 | 229 | 241 | 119 | 159 | 176 | 3,480 |
| TAH 2017-SFR2 | | | | | | | | 141 | 161 | 197 | 124 | 154 | 157 | 2,621 |
| TAH 2018-SFR1 | | | | | | | | | | | | 160 | 137 | 2,509 |
| Overall SFR | | 5,257 | 4,053 | 3,732 | 3,808 | 3,151 | 2,808 | 4,127 | 4,622 | 5,462 | 5,601 | 6,524 | 6,934 | 87,211 |

Table 5b – Lease Expiration (by Percentage)

| | | Year 2017 | | | | | Year 2018 | | | | | | |
|----------------|--|-----------|------|------|------|------|-----------|-----|-----|-----|------|------|------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 8.3 | 7.4 | 5.9 | 4.5 | 4.2 | 3.6 | 6.9 | 7.7 | 8.2 | 7.3 | 9.4 | 9.2 |
| AH4R 2014-SFR3 | | 10.0 | 9.2 | 5.9 | 5.4 | 3.6 | 3.8 | 7.7 | 7.4 | 6.9 | 6.2 | 8.0 | 9.1 |
| AH4R 2015-SFR1 | | 10.5 | 9.1 | 7.2 | 6.7 | 5.4 | 5.0 | 7.7 | 7.6 | 6.2 | 5.3 | 6.0 | 7.5 |
| AH4R 2015-SFR2 | | 8.6 | 5.2 | 3.9 | 3.2 | 3.2 | 3.7 | 5.8 | 7.5 | 9.6 | 7.6 | 10.6 | 10.3 |
| AMSR 2016-SFR1 | | 6.6 | 5.3 | 4.4 | 4.5 | 4.2 | 3.9 | 4.2 | 6.4 | 7.0 | 7.5 | 8.5 | 7.6 |
| CAH 2015-1 | | 10.3 | 9.9 | 7.8 | 7.5 | 7.0 | 4.6 | 5.7 | 5.5 | 5.8 | 6.7 | 8.5 | 10.0 |
| CSH 2016-1 | | 9.5 | 7.7 | 7.4 | 6.6 | 5.4 | 4.8 | 5.6 | 6.2 | 7.8 | 8.6 | 8.7 | 9.9 |
| CSH 2016-2 | | 7.5 | 7.2 | 5.8 | 6.1 | 5.9 | 4.2 | 5.8 | 6.4 | 7.7 | 8.2 | 9.9 | 9.0 |
| HPA 2016-2 | | 13.3 | 0.8 | 0.4 | 0.4 | 0.7 | 1.2 | 1.1 | 0.9 | 7.9 | 11.8 | 17.9 | 21.8 |
| HPA 2017-1 | | 6.3 | 10.2 | 8.6 | 13.6 | 10.9 | 8.4 | 6.7 | 5.4 | 8.1 | 8.4 | 5.4 | 1.3 |
| IH 2017-SFR2 | | | | | | | | 5.5 | 5.6 | 6.6 | 6.7 | 7.5 | 8.9 |
| IH 2018-SFR1 | | | | | | | | | | 7.3 | 8.1 | 7.5 | 8.5 |
| IH 2018-SFR2 | | | | | | | | | | | | | 5.9 |
| PRD 2015-SFR2 | | 5.8 | 3.6 | 5.4 | 6.7 | 5.6 | 4.3 | 5.7 | 7.1 | 7.9 | 9.3 | 9.9 | 6.6 |
| PRD 2015-SFR3 | | 16.6 | 9.0 | 6.9 | 5.0 | 3.0 | 2.4 | 2.6 | 3.8 | 3.4 | 5.9 | 9.3 | 9.1 |
| PRD 2016-SFR1 | | 6.4 | 3.2 | 3.9 | 5.8 | 4.1 | 5.1 | 5.9 | 7.7 | 8.6 | 10.2 | 8.4 | 6.6 |
| PRD 2016-SFR2 | | 17.1 | 11.4 | 7.2 | 5.6 | 3.4 | 3.0 | 4.0 | 3.9 | 4.0 | 4.4 | 7.2 | 8.9 |
| PRD 2017-SFR1 | | | 4.1 | 10.3 | 14.1 | 8.5 | 7.3 | 6.0 | 4.9 | 4.7 | 3.3 | 5.0 | 5.4 |
| PRD 2018-SFR1 | | | | | | | | | | | 2.6 | 2.5 | 4.6 |
| SWH 2017-1 | | | | | | 4.7 | 4.6 | 6.4 | 8.7 | 9.4 | 10.7 | 10.0 | 8.6 |
| TAH 2016-SFR1 | | 8.8 | 6.9 | 5.0 | 6.4 | 3.1 | 2.7 | 3.6 | 4.6 | 5.7 | 6.8 | 6.5 | 7.6 |
| TAH 2017-SFR1 | | | | 7.9 | 7.5 | 5.9 | 4.9 | 6.9 | 6.6 | 6.9 | 3.4 | 4.6 | 5.1 |
| TAH 2017-SFR2 | | | | | | | | 5.4 | 6.1 | 7.5 | 4.7 | 5.9 | 6.0 |
| TAH 2018-SFR1 | | | | | | | | | | | | 6.4 | 5.5 |
| Overall SFR | | 9.5 | 7.0 | 6.1 | 6.2 | 4.8 | 4.3 | 5.7 | 6.3 | 7.1 | 7.1 | 8.0 | 8.0 |

Table 5c – Lease Expiration (by Percentage) – Top MSAs

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|------------------------------|--|-----------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|------|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| Atlanta, GA | | 8.8 | 6.7 | 6.3 | 6.0 | 5.2 | 4.6 | 5.8 | 6.3 | 6.6 | 7.5 | 8.2 | 8.1 |
| Charlotte, NC | | 9.2 | 7.7 | 7.4 | 7.2 | 5.0 | 4.4 | 5.2 | 6.1 | 7.3 | 6.6 | 7.1 | 7.9 |
| Chicago, IL | | 9.1 | 7.4 | 5.9 | 5.0 | 3.0 | 3.0 | 6.6 | 8.8 | 8.2 | 7.8 | 9.3 | 8.2 |
| Dallas-Plano-Irving, TX | | 9.7 | 7.0 | 5.8 | 6.7 | 4.9 | 4.7 | 5.8 | 6.5 | 7.9 | 6.5 | 7.2 | 9.0 |
| Denver-Aurora, CO | | 10.0 | 8.3 | 7.2 | 6.2 | 4.8 | 5.2 | 5.1 | 7.3 | 8.0 | 9.8 | 10.3 | 9.6 |
| Fort Lauderdale, FL | | 6.8 | 6.0 | 6.2 | 7.9 | 6.6 | 5.4 | 7.8 | 6.3 | 7.8 | 7.1 | 8.0 | 7.0 |
| Fort Worth-Arlington, TX | | 8.7 | 6.5 | 6.0 | 6.4 | 5.2 | 4.5 | 4.8 | 6.4 | 8.1 | 7.5 | 7.8 | 8.9 |
| Houston, TX | | 9.1 | 6.1 | 5.5 | 5.2 | 5.0 | 4.4 | 5.2 | 6.2 | 7.2 | 6.3 | 6.5 | 7.0 |
| Indianapolis, IN | | 11.6 | 7.4 | 5.1 | 5.0 | 2.3 | 1.9 | 6.9 | 7.3 | 7.1 | 7.3 | 9.4 | 8.4 |
| Jacksonville, FL | | 9.2 | 5.6 | 5.6 | 8.6 | 6.5 | 5.5 | 6.9 | 6.9 | 6.3 | 5.2 | 8.5 | 6.4 |
| Las Vegas, NV | | 9.9 | 7.7 | 6.4 | 6.8 | 5.2 | 4.4 | 5.4 | 5.8 | 6.5 | 7.5 | 6.9 | 7.2 |
| Los Angeles, CA | | 7.1 | 7.3 | 6.8 | 7.0 | 6.9 | 6.0 | 6.2 | 4.7 | 7.3 | 7.2 | 6.7 | 8.0 |
| Memphis, TN | | 8.5 | 6.4 | 5.4 | 6.0 | 3.3 | 3.1 | 5.2 | 5.2 | 8.1 | 8.3 | 8.5 | 7.0 |
| Nashville, TN | | 8.5 | 6.4 | 5.4 | 7.4 | 4.6 | 4.1 | 5.3 | 5.4 | 6.4 | 7.7 | 7.5 | 8.5 |
| Orlando, FL | | 9.8 | 8.0 | 6.4 | 7.1 | 5.6 | 5.1 | 6.1 | 5.7 | 5.9 | 5.8 | 8.9 | 8.6 |
| Phoenix, AZ | | 8.9 | 7.4 | 5.9 | 8.0 | 5.6 | 5.2 | 6.7 | 7.3 | 7.2 | 7.0 | 6.8 | 6.9 |
| Raleigh-Cary, NC | | 10.0 | 7.7 | 6.8 | 7.6 | 5.2 | 4.0 | 4.3 | 6.6 | 7.1 | 6.2 | 8.1 | 8.4 |
| Riverside-San Bernardino, CA | | 7.5 | 7.0 | 6.8 | 8.2 | 7.0 | 4.1 | 5.8 | 7.0 | 8.2 | 7.9 | 8.1 | 7.2 |
| Sarasota-Bradenton-Venice, F | | 8.7 | 7.7 | 7.2 | 8.0 | 6.1 | 5.4 | 4.7 | 6.9 | 7.4 | 5.6 | 7.5 | 7.4 |
| Tampa, FL | | 9.8 | 7.8 | 6.7 | 6.1 | 5.4 | 4.8 | 5.7 | 6.4 | 6.6 | 6.8 | 7.5 | 8.0 |

Table 6a – Historical Months of Vacancy for June Vacancies (by Count)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12+ | Total |
|----------------|--|-------|-----|-----|-----|-----|----|----|----|----|----|----|-----|-------|
| AH4R 2014-SFR2 | | 31 | 34 | 24 | 22 | 9 | 4 | 3 | 1 | 5 | 0 | 0 | 1 | 134 |
| AH4R 2014-SFR3 | | 47 | 25 | 26 | 25 | 24 | 15 | 8 | 5 | 12 | 6 | 8 | 7 | 208 |
| AH4R 2015-SFR1 | | 34 | 28 | 31 | 15 | 14 | 8 | 4 | 4 | 1 | 6 | 5 | 9 | 159 |
| AH4R 2015-SFR2 | | 53 | 46 | 40 | 25 | 16 | 5 | 2 | 3 | 7 | 2 | 1 | 2 | 202 |
| AMSR 2016-SFR1 | | 101 | 45 | 40 | 19 | 14 | 16 | 6 | 2 | 3 | 1 | 1 | 2 | 250 |
| CAH 2015-1 | | 76 | 38 | 40 | 32 | 19 | 5 | 5 | 3 | 1 | 0 | 1 | 3 | 223 |
| CSH 2016-1 | | 71 | 49 | 33 | 22 | 9 | 8 | 4 | 3 | 2 | 2 | 1 | 2 | 206 |
| CSH 2016-2 | | 95 | 57 | 39 | 25 | 15 | 4 | 1 | 1 | 2 | 4 | 1 | 0 | 244 |
| HPA 2016-2 | | 36 | 25 | 14 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 86 |
| HPA 2017-1 | | 17 | 18 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| IH 2017-SFR2 | | 117 | 41 | 14 | 5 | 2 | 0 | 0 | | | | | | 179 |
| IH 2018-SFR1 | | 127 | 86 | 0 | 15 | 2 | | | | | | | | 230 |
| IH 2018-SFR2 | | 233 | 15 | | | | | | | | | | | 248 |
| PRD 2015-SFR2 | | 40 | 32 | 20 | 11 | 9 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 117 |
| PRD 2015-SFR3 | | 57 | 32 | 18 | 8 | 4 | 7 | 4 | 1 | 6 | 1 | 1 | 1 | 140 |
| PRD 2016-SFR1 | | 68 | 63 | 31 | 19 | 9 | 3 | 2 | 2 | 0 | 1 | 2 | 0 | 200 |
| PRD 2016-SFR2 | | 71 | 32 | 14 | 8 | 3 | 2 | 0 | 0 | 1 | 1 | 2 | 0 | 134 |
| PRD 2017-SFR1 | | 51 | 32 | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 90 |
| PRD 2018-SFR1 | | 35 | 8 | 1 | 0 | | | | | | | | | 44 |
| SWH 2017-1 | | 159 | 67 | 21 | 8 | 2 | 3 | 2 | 3 | 0 | | | | 265 |
| TAH 2016-SFR1 | | 62 | 43 | 18 | 11 | 10 | 7 | 2 | 1 | 1 | 0 | 0 | 1 | 156 |
| TAH 2017-SFR1 | | 50 | 17 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 76 |
| TAH 2017-SFR2 | | 51 | 15 | 10 | 1 | 1 | 1 | 0 | | | | | | 79 |
| TAH 2018-SFR1 | | 25 | 54 | 1 | | | | | | | | | | 80 |
| Overall SFR | | 1,707 | 902 | 451 | 283 | 165 | 93 | 45 | 29 | 42 | 24 | 23 | 28 | 3,792 |

Table 6b – Historical Months of Vacancy for June Vacancies (by Percentage)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12+ | Total |
|----------------|--|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-------|
| AH4R 2014-SFR2 | | 23.1 | 25.4 | 17.9 | 16.4 | 6.7 | 3.0 | 2.2 | 0.7 | 3.7 | 0.0 | 0.0 | 0.7 | 100.0 |
| AH4R 2014-SFR3 | | 22.6 | 12.0 | 12.5 | 12.0 | 11.5 | 7.2 | 3.8 | 2.4 | 5.8 | 2.9 | 3.8 | 3.4 | 100.0 |
| AH4R 2015-SFR1 | | 21.4 | 17.6 | 19.5 | 9.4 | 8.8 | 5.0 | 2.5 | 2.5 | 0.6 | 3.8 | 3.1 | 5.7 | 100.0 |
| AH4R 2015-SFR2 | | 26.2 | 22.8 | 19.8 | 12.4 | 7.9 | 2.5 | 1.0 | 1.5 | 3.5 | 1.0 | 0.5 | 1.0 | 100.0 |
| AMSR 2016-SFR1 | | 40.4 | 18.0 | 16.0 | 7.6 | 5.6 | 6.4 | 2.4 | 0.8 | 1.2 | 0.4 | 0.4 | 0.8 | 100.0 |
| CAH 2015-1 | | 34.1 | 17.0 | 17.9 | 14.3 | 8.5 | 2.2 | 2.2 | 1.3 | 0.4 | 0.0 | 0.4 | 1.3 | 100.0 |
| CSH 2016-1 | | 34.5 | 23.8 | 16.0 | 10.7 | 4.4 | 3.9 | 1.9 | 1.5 | 1.0 | 1.0 | 0.5 | 1.0 | 100.0 |
| CSH 2016-2 | | 38.9 | 23.4 | 16.0 | 10.2 | 6.1 | 1.6 | 0.4 | 0.4 | 0.8 | 1.6 | 0.4 | 0.0 | 100.0 |
| HPA 2016-2 | | 41.9 | 29.1 | 16.3 | 9.3 | 2.3 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| HPA 2017-1 | | 40.5 | 42.9 | 11.9 | 2.4 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| IH 2017-SFR2 | | 65.4 | 22.9 | 7.8 | 2.8 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| IH 2018-SFR1 | | 55.2 | 37.4 | 0.0 | 6.5 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| IH 2018-SFR2 | | 94.0 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| PRD 2015-SFR2 | | 34.2 | 27.4 | 17.1 | 9.4 | 7.7 | 2.6 | 0.9 | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 | 100.0 |
| PRD 2015-SFR3 | | 40.7 | 22.9 | 12.9 | 5.7 | 2.9 | 5.0 | 2.9 | 0.7 | 4.3 | 0.7 | 0.7 | 0.7 | 100.0 |
| PRD 2016-SFR1 | | 34.0 | 31.5 | 15.5 | 9.5 | 4.5 | 1.5 | 1.0 | 1.0 | 0.0 | 0.5 | 1.0 | 0.0 | 100.0 |
| PRD 2016-SFR2 | | 53.0 | 23.9 | 10.4 | 6.0 | 2.2 | 1.5 | 0.0 | 0.0 | 0.7 | 0.7 | 1.5 | 0.0 | 100.0 |
| PRD 2017-SFR1 | | 56.7 | 35.6 | 5.6 | 0.0 | 0.0 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| PRD 2018-SFR1 | | 79.5 | 18.2 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| SWH 2017-1 | | 60.0 | 25.3 | 7.9 | 3.0 | 0.8 | 1.1 | 0.8 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| TAH 2016-SFR1 | | 39.7 | 27.6 | 11.5 | 7.1 | 6.4 | 4.5 | 1.3 | 0.6 | 0.6 | 0.0 | 0.0 | 0.6 | 100.0 |
| TAH 2017-SFR1 | | 65.8 | 22.4 | 7.9 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| TAH 2017-SFR2 | | 64.6 | 19.0 | 12.7 | 1.3 | 1.3 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| TAH 2018-SFR1 | | 31.3 | 67.5 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Overall SFR | | 45.0 | 23.8 | 11.9 | 7.5 | 4.4 | 2.5 | 1.2 | 0.8 | 1.1 | 0.6 | 0.6 | 0.7 | 100.0 |

Table 7 – Delinquency Definition



| Issuer | Definition |
|------------------------------|--|
| American Homes 4 Rent | Past due one calendar month or more (not dependent on day count) and owing \$200 or more |
| Amherst | Past due one calendar month or more (not dependent on day count) and owing \$500 or more |
| Colony American Homes/Colony | |
| Starwood Homes/Starwood | Past due one calendar month or more (not dependent on day count) and owing \$200 or more |
| Waypoint Homes | |
| Home Partners of America | Past due 30 days or more (not dependent on calendar month) and owing \$500 or more |
| Invitation Homes | Past due 30 days or more (not dependent on calendar month) and owing 25% of one month's rent or more |
| Progress Residential | Past due 30 days or more (not dependent on calendar month) and owing \$200 or more ¹ |
| Tricon American Homes | Past due 30 days or more (not dependent on calendar month) and owing \$500 or more ² |

¹Includes Section 8 rent, pet fees, and MTM fees, but excludes late fees and damage fees.

²Based on total receivables.

Table 8a – Month-End Delinquency (by Count)

| | | Year 2017 | | | | | | Year 2018 | | | | | | Total Count |
|----------------|--|-----------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-------------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | |
| AH4R 2014-SFR2 | | 13 | 15 | 9 | 21 | 19 | 20 | 20 | 22 | 8 | 7 | 7 | 12 | 4,481 |
| AH4R 2014-SFR3 | | 7 | 11 | 7 | 21 | 12 | 14 | 19 | 20 | 7 | 12 | 9 | 5 | 4,499 |
| AH4R 2015-SFR1 | | 12 | 14 | 21 | 26 | 28 | 26 | 22 | 29 | 13 | 15 | 8 | 12 | 4,634 |
| AH4R 2015-SFR2 | | 7 | 6 | 10 | 17 | 24 | 10 | 21 | 18 | 6 | 7 | 10 | 7 | 4,123 |
| AMSR 2016-SFR1 | | 171 | 78 | 66 | 97 | 111 | 114 | 98 | 95 | 80 | 60 | 75 | 73 | 4,262 |
| CAH 2015-1 | | 17 | 22 | 30 | 28 | 31 | 32 | 20 | 23 | 26 | 17 | 42 | 35 | 3,758 |
| CSH 2016-1 | | 24 | 21 | 29 | 28 | 26 | 29 | 33 | 26 | 21 | 7 | 29 | 37 | 3,516 |
| CSH 2016-2 | | 27 | 23 | 43 | 34 | 40 | 48 | 37 | 36 | 24 | 13 | 36 | 32 | 3,955 |
| HPA 2016-2 | | 9 | 12 | 19 | 17 | 12 | 16 | 9 | 10 | 9 | 6 | 11 | 12 | 1,301 |
| HPA 2017-1 | | 9 | 13 | 17 | 12 | 11 | 7 | 10 | 10 | 5 | 8 | 7 | 9 | 1,345 |
| IH 2017-SFR2 | | | | | | | | 33 | 30 | 19 | 15 | 27 | 33 | 4,411 |
| IH 2018-SFR1 | | | | | | | | | | 15 | 29 | 30 | 38 | 4,289 |
| IH 2018-SFR2 | | | | | | | | | | | | | 43 | 5,610 |
| PRD 2015-SFR2 | | 19 | 14 | 26 | 25 | 23 | 24 | 28 | 21 | 18 | 10 | 24 | 18 | 3,287 |
| PRD 2015-SFR3 | | 16 | 19 | 22 | 23 | 17 | 22 | 29 | 25 | 20 | 17 | 19 | 0 | 3,150 |
| PRD 2016-SFR1 | | 28 | 29 | 27 | 43 | 45 | 44 | 39 | 40 | 31 | 28 | 27 | 0 | 5,549 |
| PRD 2016-SFR2 | | 20 | 16 | 24 | 23 | 19 | 39 | 41 | 0 | 26 | 18 | 17 | 0 | 3,742 |
| PRD 2017-SFR1 | | | 14 | 20 | 19 | 16 | 17 | 17 | 22 | 16 | 17 | 14 | 0 | 2,708 |
| PRD 2018-SFR1 | | | | | | | | | | | 15 | 16 | 0 | 2,113 |
| SWH 2017-1 | | | | | | 34 | 36 | 45 | 45 | 31 | 19 | 45 | 45 | 4,432 |
| TAH 2016-SFR1 | | 9 | 5 | 3 | 2 | 15 | 15 | 18 | 23 | 10 | 10 | 21 | 9 | 3,436 |
| TAH 2017-SFR1 | | | | 25 | 19 | 14 | 12 | 10 | 12 | 2 | 3 | 26 | 0 | 3,480 |
| TAH 2017-SFR2 | | | | | | | | 7 | 9 | 4 | 6 | 13 | 4 | 2,621 |
| TAH 2018-SFR1 | | | | | | | | | | | | 0 | 2 | 2,509 |
| Overall SFR | | 388 | 312 | 398 | 455 | 497 | 525 | 556 | 516 | 391 | 339 | 513 | 426 | 87,211 |

Table 8b – Month-End Delinquency (by Percentage)

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|----------------|--|-----------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 0.3 | 0.3 | 0.2 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 | 0.2 | 0.2 | 0.2 | 0.3 |
| AH4R 2014-SFR3 | | 0.2 | 0.2 | 0.2 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.2 | 0.3 | 0.2 | 0.1 |
| AH4R 2015-SFR1 | | 0.3 | 0.3 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.3 | 0.3 | 0.2 | 0.3 |
| AH4R 2015-SFR2 | | 0.2 | 0.1 | 0.2 | 0.4 | 0.6 | 0.2 | 0.5 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 |
| AMSR 2016-SFR1 | | 4.0 | 1.8 | 1.5 | 2.3 | 2.6 | 2.7 | 2.3 | 2.2 | 1.9 | 1.4 | 1.8 | 1.7 |
| CAH 2015-1 | | 0.4 | 0.6 | 0.8 | 0.7 | 0.8 | 0.8 | 0.5 | 0.6 | 0.7 | 0.5 | 1.1 | 0.9 |
| CSH 2016-1 | | 0.7 | 0.6 | 0.8 | 0.8 | 0.7 | 0.8 | 0.9 | 0.7 | 0.6 | 0.2 | 0.8 | 1.1 |
| CSH 2016-2 | | 0.7 | 0.6 | 1.1 | 0.9 | 1.0 | 1.2 | 0.9 | 0.9 | 0.6 | 0.3 | 0.9 | 0.8 |
| HPA 2016-2 | | 0.7 | 0.9 | 1.4 | 1.3 | 0.9 | 1.2 | 0.7 | 0.8 | 0.7 | 0.5 | 0.8 | 0.9 |
| HPA 2017-1 | | 0.6 | 0.9 | 1.2 | 0.9 | 0.8 | 0.5 | 0.7 | 0.7 | 0.4 | 0.6 | 0.5 | 0.7 |
| IH 2017-SFR2 | | | | | | | | 0.7 | 0.7 | 0.4 | 0.3 | 0.6 | 0.7 |
| IH 2018-SFR1 | | | | | | | | | | 0.3 | 0.7 | 0.7 | 0.9 |
| IH 2018-SFR2 | | | | | | | | | | | | | 0.8 |
| PRD 2015-SFR2 | | 0.6 | 0.4 | 0.8 | 0.8 | 0.7 | 0.7 | 0.9 | 0.6 | 0.5 | 0.3 | 0.7 | 0.5 |
| PRD 2015-SFR3 | | 0.5 | 0.6 | 0.7 | 0.7 | 0.5 | 0.7 | 0.9 | 0.8 | 0.6 | 0.5 | 0.6 | 0.0 |
| PRD 2016-SFR1 | | 0.5 | 0.5 | 0.5 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 0.5 | 0.5 | 0.0 |
| PRD 2016-SFR2 | | 0.5 | 0.4 | 0.6 | 0.6 | 0.5 | 1.0 | 1.1 | 0.0 | 0.7 | 0.5 | 0.5 | 0.0 |
| PRD 2017-SFR1 | | | 0.5 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.8 | 0.6 | 0.6 | 0.5 | 0.0 |
| PRD 2018-SFR1 | | | | | | | | | | | 0.7 | 0.8 | 0.0 |
| SWH 2017-1 | | | | | | 0.8 | 0.8 | 1.0 | 1.0 | 0.7 | 0.4 | 1.0 | 1.0 |
| TAH 2016-SFR1 | | 0.3 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.5 | 0.7 | 0.3 | 0.3 | 0.6 | 0.3 |
| TAH 2017-SFR1 | | | | 0.7 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.7 | 0.0 |
| TAH 2017-SFR2 | | | | | | | | 0.3 | 0.3 | 0.2 | 0.2 | 0.5 | 0.2 |
| TAH 2018-SFR1 | | | | | | | | | | | | 0.0 | 0.1 |
| Overall SFR | | 0.7 | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 | 0.8 | 0.7 | 0.5 | 0.4 | 0.6 | 0.5 |

Table 9 – Monthly Retention Rate of Expiring Leases

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|----------------|--|-----------|------|-------|------|------|------|-----------|------|------|------|------|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 76.0 | 73.1 | 74.6 | 78.6 | 75.1 | 75.2 | 77.4 | 78.9 | 80.4 | 79.3 | 76.8 | TBD |
| AH4R 2014-SFR3 | | 71.4 | 72.6 | 73.6 | 71.0 | 78.1 | 78.9 | 76.7 | 81.9 | 74.3 | 80.0 | 73.1 | TBD |
| AH4R 2015-SFR1 | | 74.8 | 74.9 | 75.9 | 75.7 | 77.3 | 76.2 | 75.3 | 74.9 | 77.7 | 72.5 | 72.3 | TBD |
| AH4R 2015-SFR2 | | 72.7 | 67.3 | 62.9 | 78.0 | 68.4 | 76.2 | 76.1 | 80.3 | 75.3 | 75.2 | 72.1 | TBD |
| AMSR 2016-SFR1 | | 83.3 | 79.6 | 87.1 | 86.0 | 87.1 | 85.6 | 88.8 | 83.0 | 80.3 | 80.9 | 80.6 | TBD |
| CAH 2015-1 | | 76.1 | 73.5 | 80.2 | 81.5 | 74.4 | 77.1 | 83.3 | 75.8 | 79.9 | 84.9 | 86.2 | TBD |
| CSH 2016-1 | | 76.2 | 75.5 | 76.1 | 83.3 | 73.8 | 79.4 | 76.6 | 82.7 | 76.1 | 79.5 | 78.2 | TBD |
| CSH 2016-2 | | 68.0 | 68.3 | 73.0 | 78.6 | 67.5 | 73.1 | 78.9 | 80.9 | 80.7 | 79.7 | 72.7 | TBD |
| HPA 2016-2 | | 84.4 | 63.6 | 100.0 | 66.7 | 90.0 | 81.3 | 78.6 | 75.0 | 77.1 | 77.4 | 75.7 | TBD |
| HPA 2017-1 | | 81.6 | 85.1 | 80.5 | 82.3 | 89.3 | 83.3 | 87.9 | 79.7 | 80.9 | 75.4 | 78.1 | TBD |
| IH 2017-SFR2 | | | | | | | | 78.1 | 80.6 | 83.2 | 81.0 | 79.7 | TBD |
| IH 2018-SFR1 | | | | | | | | | | 84.6 | 78.9 | 80.2 | TBD |
| IH 2018-SFR2 | | | | | | | | | | | | | TBD |
| PRD 2015-SFR2 | | 75.5 | 70.3 | 72.1 | 78.7 | 80.0 | 83.1 | 79.9 | 77.4 | 81.9 | 85.3 | 78.1 | TBD |
| PRD 2015-SFR3 | | 71.4 | 66.9 | 67.1 | 73.9 | 77.4 | 73.7 | 72.8 | 75.8 | 75.9 | 80.2 | 79.8 | TBD |
| PRD 2016-SFR1 | | 69.8 | 65.9 | 68.5 | 79.5 | 77.0 | 76.9 | 80.9 | 78.4 | 81.7 | 81.1 | 80.8 | TBD |
| PRD 2016-SFR2 | | 75.6 | 70.4 | 77.0 | 79.4 | 80.3 | 80.5 | 87.3 | 81.4 | 82.4 | 78.8 | 79.7 | TBD |
| PRD 2017-SFR1 | | | 69.6 | 73.1 | 79.8 | 76.0 | 76.1 | 82.1 | 81.2 | 91.3 | 83.1 | 72.1 | TBD |
| PRD 2018-SFR1 | | | | | | | | | | | 85.2 | 75.0 | TBD |
| SWH 2017-1 | | | | | | 74.8 | 84.8 | 81.3 | 75.8 | 78.5 | 78.5 | 85.7 | TBD |
| TAH 2016-SFR1 | | 82.7 | 85.3 | 81.3 | 82.8 | 78.5 | 84.8 | 81.5 | 83.6 | 81.2 | 85.5 | 81.3 | TBD |
| TAH 2017-SFR1 | | | | 77.2 | 82.8 | 84.0 | 88.3 | 79.3 | 82.5 | 79.7 | 84.0 | 78.0 | TBD |
| TAH 2017-SFR2 | | | | | | | | 76.6 | 81.4 | 80.7 | 78.2 | 78.6 | TBD |
| TAH 2018-SFR1 | | | | | | | | | | | | 77.5 | TBD |
| Overall SFR | | 75.0 | 73.1 | 75.1 | 79.5 | 77.3 | 79.4 | 79.5 | 79.5 | 79.9 | 80.0 | 78.2 | TBD |

TBD – To Be Determined

Table 10 – Monthly Retention Rate of MTM Leases

| | | Year 2017 | | | | | Year 2018 | | | | | | |
|----------------|--|-----------|-------|-------|------|------|-----------|-------|------|-------|------|------|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 78.9 | 80.4 | 82.4 | 83.7 | 87.4 | 86.8 | 89.7 | 87.3 | 86.9 | 87.5 | 85.9 | TBD |
| AH4R 2014-SFR3 | | 78.6 | 81.9 | 86.0 | 83.2 | 81.4 | 89.2 | 90.0 | 85.8 | 83.6 | 86.4 | 76.0 | TBD |
| AH4R 2015-SFR1 | | 81.4 | 81.3 | 81.3 | 81.0 | 87.1 | 84.9 | 86.5 | 82.3 | 88.6 | 86.1 | 78.7 | TBD |
| AH4R 2015-SFR2 | | 79.3 | 81.1 | 81.2 | 87.0 | 80.9 | 88.8 | 86.4 | 85.5 | 82.9 | 82.6 | 72.6 | TBD |
| AMSR 2016-SFR1 | | 94.2 | 92.4 | 96.7 | 95.7 | 95.0 | 93.7 | 98.2 | 95.2 | 94.6 | 95.5 | 90.9 | TBD |
| CAH 2015-1 | | 77.8 | 81.1 | 72.5 | 80.0 | 74.4 | 78.0 | 72.5 | 91.7 | 81.0 | 88.6 | 77.8 | TBD |
| CSH 2016-1 | | 66.0 | 75.6 | 78.9 | 67.5 | 75.0 | 79.3 | 77.8 | 78.6 | 80.0 | 75.7 | 85.7 | TBD |
| CSH 2016-2 | | 70.2 | 78.4 | 57.5 | 62.9 | 70.4 | 74.1 | 75.0 | 75.8 | 78.1 | 77.8 | 83.9 | TBD |
| HPA 2016-2 | | 100.0 | 100.0 | 100.0 | | | | | | | | | TBD |
| HPA 2017-1 | | | | | | | | | | | | | TBD |
| IH 2017-SFR2 | | | | | | | | 91.0 | 78.4 | 89.1 | 82.9 | 80.6 | TBD |
| IH 2018-SFR1 | | | | | | | | | | 77.2 | 87.5 | 77.6 | TBD |
| IH 2018-SFR2 | | | | | | | | | | | | | TBD |
| PRD 2015-SFR2 | | 72.6 | 72.7 | 82.6 | 81.0 | 78.6 | 79.5 | 80.6 | 91.9 | 88.4 | 82.5 | 76.7 | TBD |
| PRD 2015-SFR3 | | 75.9 | 73.7 | 78.6 | 75.7 | 75.5 | 76.7 | 83.3 | 80.6 | 84.4 | 70.0 | 72.4 | TBD |
| PRD 2016-SFR1 | | 79.5 | 80.0 | 80.7 | 88.0 | 81.8 | 81.9 | 85.0 | 80.9 | 78.8 | 79.3 | 76.7 | TBD |
| PRD 2016-SFR2 | | 78.3 | 73.9 | 77.2 | 78.8 | 76.8 | 81.8 | 100.0 | 65.8 | 91.1 | 96.0 | 72.2 | TBD |
| PRD 2017-SFR1 | | | 81.3 | 73.5 | 76.3 | 66.7 | 91.4 | 82.1 | 91.2 | 100.0 | 68.1 | 61.3 | TBD |
| PRD 2018-SFR1 | | | | | | | | | | | 75.0 | 60.0 | TBD |
| SWH 2017-1 | | | | | | 61.3 | 80.8 | 75.0 | 71.4 | 82.4 | 78.3 | 77.0 | TBD |
| TAH 2016-SFR1 | | 92.2 | 91.3 | 93.6 | 95.1 | 95.5 | 92.9 | 95.5 | 94.4 | 95.3 | 95.3 | 89.4 | TBD |
| TAH 2017-SFR1 | | | | 88.1 | 92.5 | 93.5 | 87.0 | 90.2 | 87.6 | 85.7 | 84.3 | 86.8 | TBD |
| TAH 2017-SFR2 | | | | | | | | 98.2 | 93.1 | 88.1 | 92.7 | 89.5 | TBD |
| TAH 2018-SFR1 | | | | | | | | | | | | 92.1 | TBD |
| Overall SFR | | 84.2 | 84.6 | 87.0 | 88.3 | 88.2 | 88.9 | 92.2 | 88.6 | 88.9 | 88.7 | 84.0 | TBD |

TBD – To Be Determined

Table 11a – MTM Tenants (by Count)

| | | Year 2017 | | | | | Year 2018 | | | | | | | | Total Count |
|----------------|--|-----------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-------|--------|-------------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | | |
| AH4R 2014-SFR2 | | 251 | 245 | 217 | 185 | 178 | 175 | 170 | 190 | 206 | 208 | 232 | 237 | 4,481 | |
| AH4R 2014-SFR3 | | 227 | 216 | 199 | 180 | 168 | 148 | 155 | 188 | 220 | 199 | 233 | 226 | 4,499 | |
| AH4R 2015-SFR1 | | 221 | 229 | 227 | 198 | 195 | 187 | 184 | 204 | 220 | 219 | 223 | 205 | 4,634 | |
| AH4R 2015-SFR2 | | 215 | 207 | 179 | 147 | 156 | 143 | 143 | 150 | 183 | 200 | 235 | 221 | 4,123 | |
| AMSR 2016-SFR1 | | 574 | 600 | 605 | 648 | 684 | 709 | 696 | 733 | 747 | 759 | 761 | 754 | 4,262 | |
| CAH 2015-1 | | 36 | 37 | 40 | 40 | 43 | 41 | 40 | 36 | 42 | 44 | 54 | 66 | 3,758 | |
| CSH 2016-1 | | 47 | 41 | 38 | 40 | 36 | 29 | 27 | 28 | 30 | 37 | 42 | 55 | 3,516 | |
| CSH 2016-2 | | 47 | 37 | 40 | 35 | 27 | 27 | 28 | 33 | 32 | 27 | 31 | 45 | 3,955 | |
| HPA 2016-2 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,301 | |
| HPA 2017-1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,345 | |
| IH 2017-SFR2 | | | | | | | | 92 | 95 | 115 | 101 | 111 | 105 | 4,411 | |
| IH 2018-SFR1 | | | | | | | | | | 92 | 104 | 116 | 125 | 4,289 | |
| IH 2018-SFR2 | | | | | | | | | | | | | 104 | 5,610 | |
| PRD 2015-SFR2 | | 76 | 71 | 63 | 66 | 64 | 49 | 55 | 58 | 65 | 62 | 65 | 59 | 3,287 | |
| PRD 2015-SFR3 | | 112 | 115 | 110 | 87 | 60 | 52 | 49 | 50 | 41 | 46 | 63 | 54 | 3,150 | |
| PRD 2016-SFR1 | | 151 | 125 | 116 | 122 | 111 | 120 | 119 | 127 | 127 | 126 | 133 | 116 | 5,549 | |
| PRD 2016-SFR2 | | 122 | 137 | 123 | 99 | 85 | 70 | 71 | 201 | 59 | 63 | 78 | 81 | 3,742 | |
| PRD 2017-SFR1 | | | 47 | 62 | 76 | 67 | 49 | 46 | 47 | 47 | 108 | 49 | 47 | 2,708 | |
| PRD 2018-SFR1 | | | | | | | | | | | 6 | 14 | 18 | 2,113 | |
| SWH 2017-1 | | | | | | 31 | 26 | 24 | 28 | 34 | 60 | 87 | 84 | 4,432 | |
| TAH 2016-SFR1 | | 348 | 371 | 379 | 360 | 377 | 339 | 257 | 252 | 261 | 215 | 278 | 253 | 3,436 | |
| TAH 2017-SFR1 | | | | 207 | 197 | 217 | 225 | 195 | 197 | 184 | 121 | 127 | 114 | 3,480 | |
| TAH 2017-SFR2 | | | | | | | | 229 | 195 | 194 | 176 | 174 | 152 | 2,621 | |
| TAH 2018-SFR1 | | | | | | | | | | | | 118 | 128 | 2,509 | |
| Overall SFR | | 2,428 | 2,479 | 2,606 | 2,480 | 2,499 | 2,389 | 2,580 | 2,812 | 2,899 | 2,881 | 3,224 | 3,249 | 87,211 | |

Table 11b – MTM Tenants (by Percentage)

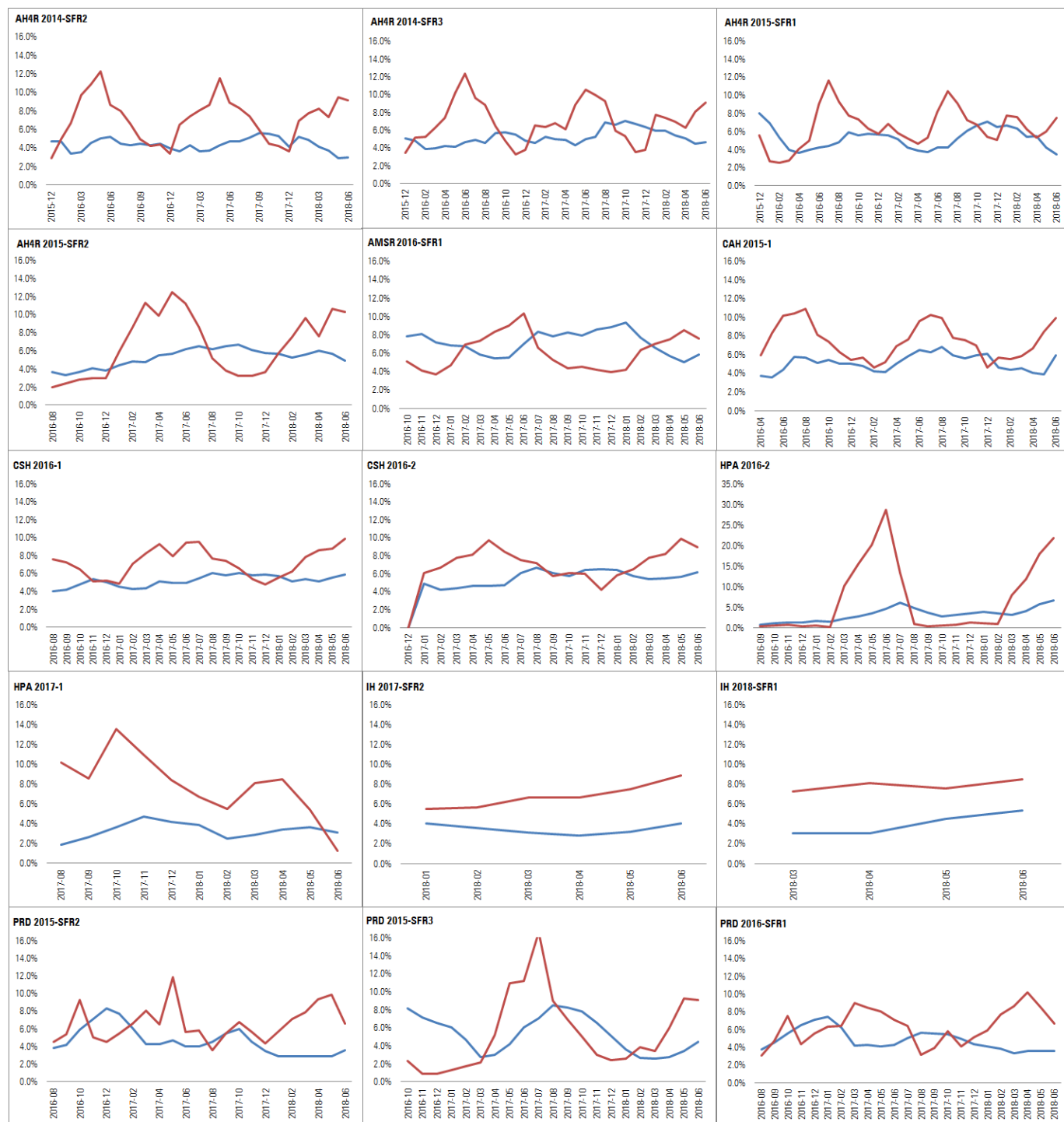
| | | Year 2017 | | | | | | Year 2018 | | | | | |
|----------------|--|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 5.6 | 5.5 | 4.8 | 4.1 | 4.0 | 3.9 | 3.8 | 4.2 | 4.6 | 4.6 | 5.2 | 5.3 |
| AH4R 2014-SFR3 | | 5.0 | 4.8 | 4.4 | 4.0 | 3.7 | 3.3 | 3.4 | 4.2 | 4.9 | 4.4 | 5.2 | 5.0 |
| AH4R 2015-SFR1 | | 4.7 | 4.9 | 4.9 | 4.2 | 4.2 | 4.0 | 4.0 | 4.4 | 4.7 | 4.7 | 4.8 | 4.4 |
| AH4R 2015-SFR2 | | 5.2 | 5.0 | 4.3 | 3.6 | 3.8 | 3.5 | 3.5 | 3.6 | 4.4 | 4.9 | 5.7 | 5.4 |
| AMSR 2016-SFR1 | | 13.5 | 14.1 | 14.2 | 15.2 | 16.0 | 16.6 | 16.3 | 17.2 | 17.5 | 17.8 | 17.9 | 17.7 |
| CAH 2015-1 | | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.2 | 1.4 | 1.8 |
| CSH 2016-1 | | 1.3 | 1.2 | 1.1 | 1.1 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 1.0 | 1.2 | 1.6 |
| CSH 2016-2 | | 1.2 | 0.9 | 1.0 | 0.9 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 | 1.1 |
| HPA 2016-2 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HPA 2017-1 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IH 2017-SFR2 | | | | | | | | 2.1 | 2.2 | 2.6 | 2.3 | 2.5 | 2.4 |
| IH 2018-SFR1 | | | | | | | | | | 2.1 | 2.4 | 2.7 | 2.9 |
| IH 2018-SFR2 | | | | | | | | | | | | | 1.9 |
| PRD 2015-SFR2 | | 2.3 | 2.2 | 1.9 | 2.0 | 1.9 | 1.5 | 1.7 | 1.8 | 2.0 | 1.9 | 2.0 | 1.8 |
| PRD 2015-SFR3 | | 3.5 | 3.6 | 3.5 | 2.8 | 1.9 | 1.7 | 1.6 | 1.6 | 1.3 | 1.5 | 2.0 | 1.7 |
| PRD 2016-SFR1 | | 2.7 | 2.2 | 2.1 | 2.2 | 2.0 | 2.2 | 2.1 | 2.3 | 2.3 | 2.3 | 2.4 | 2.1 |
| PRD 2016-SFR2 | | 3.3 | 3.7 | 3.3 | 2.6 | 2.3 | 1.9 | 1.9 | 5.4 | 1.6 | 1.7 | 2.1 | 2.2 |
| PRD 2017-SFR1 | | | 1.7 | 2.3 | 2.8 | 2.5 | 1.8 | 1.7 | 1.7 | 1.7 | 4.0 | 1.8 | 1.7 |
| PRD 2018-SFR1 | | | | | | | | | | | 0.3 | 0.7 | 0.9 |
| SWH 2017-1 | | | | | | 0.7 | 0.6 | 0.5 | 0.6 | 0.8 | 1.4 | 2.0 | 1.9 |
| TAH 2016-SFR1 | | 10.1 | 10.8 | 11.0 | 10.5 | 11.0 | 9.9 | 7.5 | 7.3 | 7.6 | 6.3 | 8.1 | 7.4 |
| TAH 2017-SFR1 | | | | 5.9 | 5.7 | 6.2 | 6.5 | 5.6 | 5.7 | 5.3 | 3.5 | 3.6 | 3.3 |
| TAH 2017-SFR2 | | | | | | | | 8.7 | 7.4 | 7.4 | 6.7 | 6.6 | 5.8 |
| TAH 2018-SFR1 | | | | | | | | | | | | 4.7 | 5.1 |
| Overall SFR | | 4.4 | 4.3 | 4.2 | 4.0 | 3.8 | 3.6 | 3.5 | 3.9 | 3.8 | 3.6 | 3.9 | 3.7 |

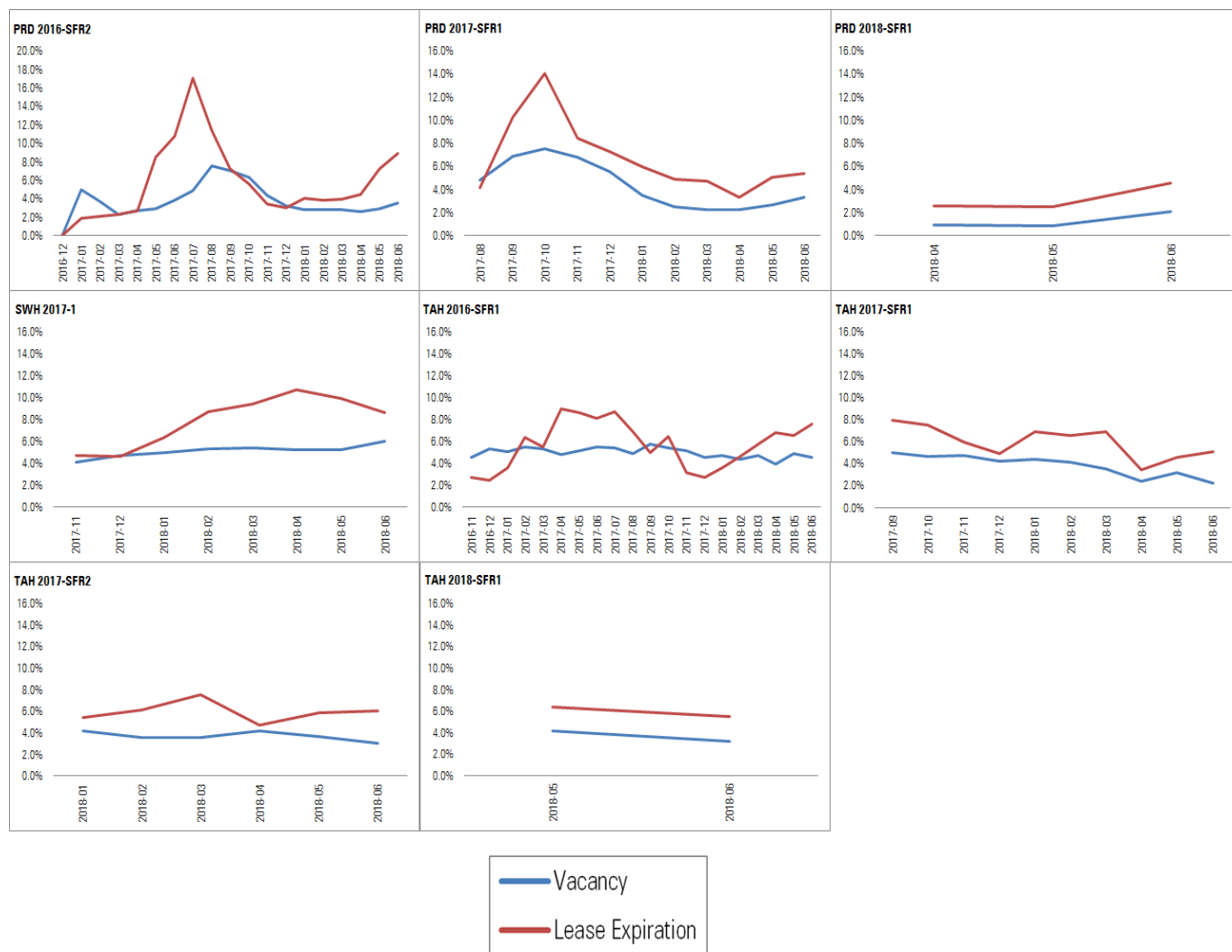
Table 12 – Monthly Turnover Rate

| | | Year 2017 | | | | | | Year 2018 | | | | | |
|----------------|--|-----------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|
| | | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| AH4R 2014-SFR2 | | 3.9 | 3.9 | 2.9 | 2.9 | 2.5 | 2.2 | 2.8 | 2.4 | 2.9 | 2.7 | 3.9 | TBD |
| AH4R 2014-SFR3 | | 5.1 | 4.3 | 3.4 | 3.1 | 2.1 | 2.4 | 2.6 | 2.4 | 3.3 | 3.0 | 3.6 | TBD |
| AH4R 2015-SFR1 | | 4.2 | 4.1 | 3.9 | 3.4 | 2.8 | 2.8 | 3.4 | 3.2 | 3.2 | 2.6 | 3.0 | TBD |
| AH4R 2015-SFR2 | | 4.4 | 3.7 | 3.3 | 2.5 | 2.3 | 2.9 | 2.5 | 2.6 | 4.0 | 3.6 | 4.4 | TBD |
| AMSR 2016-SFR1 | | 3.3 | 2.5 | 2.1 | 2.1 | 2.0 | 2.2 | 2.8 | 1.7 | 2.7 | 2.9 | 2.8 | TBD |
| CAH 2015-1 | | 3.8 | 4.1 | 2.7 | 3.2 | 2.8 | 2.3 | 1.9 | 2.6 | 2.6 | 1.7 | 3.0 | TBD |
| CSH 2016-1 | | 3.4 | 3.6 | 2.9 | 2.9 | 2.6 | 2.1 | 2.2 | 2.3 | 3.2 | 2.5 | 4.0 | TBD |
| CSH 2016-2 | | 4.3 | 4.5 | 3.0 | 3.2 | 3.0 | 2.4 | 2.6 | 2.5 | 3.2 | 2.3 | 4.1 | TBD |
| HPA 2016-2 | | 3.6 | 1.9 | 1.0 | 1.6 | 2.2 | 1.2 | 1.7 | 1.5 | 3.5 | 3.8 | 5.7 | TBD |
| HPA 2017-1 | | 2.2 | 2.5 | 2.3 | 3.6 | 2.3 | 1.7 | 1.6 | 1.9 | 2.4 | 2.5 | 2.4 | TBD |
| IH 2017-SFR2 | | | | | | | | 2.4 | 2.2 | 2.4 | 2.4 | 2.8 | TBD |
| IH 2018-SFR1 | | | | | | | | | | 1.8 | 2.8 | 2.9 | TBD |
| IH 2018-SFR2 | | | | | | | | | | | | | TBD |
| PRD 2015-SFR2 | | 3.0 | 3.2 | 3.1 | 2.9 | 2.5 | 2.2 | 2.4 | 2.5 | 3.5 | 3.3 | 5.0 | TBD |
| PRD 2015-SFR3 | | 7.1 | 4.6 | 4.2 | 3.0 | 2.4 | 2.0 | 2.0 | 2.0 | 2.2 | 2.3 | 3.5 | TBD |
| PRD 2016-SFR1 | | 3.5 | 3.2 | 3.2 | 2.9 | 2.4 | 2.6 | 2.6 | 2.8 | 3.0 | 3.4 | 3.7 | TBD |
| PRD 2016-SFR2 | | 5.2 | 5.3 | 3.2 | 3.0 | 1.7 | 1.7 | 2.0 | 2.2 | 2.5 | 2.2 | 3.3 | TBD |
| PRD 2017-SFR1 | | | 7.5 | 4.3 | 4.1 | 3.8 | 3.5 | 2.4 | 1.8 | 2.1 | 1.6 | 3.4 | TBD |
| PRD 2018-SFR1 | | | | | | | | | | | 3.3 | 1.9 | TBD |
| SWH 2017-1 | | | | | | 2.0 | 2.3 | 2.4 | 3.0 | 3.7 | 2.7 | 3.6 | TBD |
| TAH 2016-SFR1 | | 3.1 | 2.8 | 3.5 | 2.2 | 2.5 | 1.7 | 2.1 | 1.7 | 2.4 | 2.3 | 2.8 | TBD |
| TAH 2017-SFR1 | | | | 6.6 | 3.3 | 2.7 | 2.0 | 3.1 | 2.4 | 2.7 | 2.3 | 2.3 | TBD |
| TAH 2017-SFR2 | | | | | | | | 6.3 | 1.3 | 2.7 | 2.7 | 2.2 | TBD |
| TAH 2018-SFR1 | | | | | | | | | | | | 6.5 | TBD |
| Overall SFR | | 4.1 | 3.9 | 3.4 | 3.0 | 2.5 | 2.3 | 2.6 | 2.4 | 2.9 | 2.7 | 3.5 | TBD |

TBD – To Be Determined

Appendix I – Vacancy Versus Lease Expiration





Appendix II – Description of Analysis

Morningstar tracks key metrics to gauge the performance of single-borrower, single-family rental transactions that Morningstar rates. There are several ways to view these metrics. For example, the vacancy rate might be calculated based on property count, by cash flow, or by days of occupancy. To account for different reporting across issuers, Morningstar seeks commonality across the single-borrower issuers' monthly reporting to derive its calculations.

Multiborrower deals are similar to single-borrower transactions in that the underlying collateral is generally single-family rental properties. They differ, though, in that single-borrower deals are backed by one loan, while multiborrower deals have many loans. As such, the monthly reporting for multiborrower deals is different from the data reported in the single-borrower sector. For example, delinquency reported in Tables 8a and 8b are tenants that are past due on rental payments at a property level. For multiborrower transactions, delinquency is measured by borrowers that are past due on payments at the loan level.

Table 1 – Multiborrower Loan Performance by Percentage of Balance

To calculate the percentage of loans delinquent, in foreclosure, and/or in special servicing, Morningstar takes the respective balance divided by the current deal balance.

Table 2 – Multiborrower Loan Performance by Loan Count

Morningstar shows the total loan count in a securitization and the number of loans 30-59 days delinquent, 60-89 days delinquent, over 90 days delinquent, in foreclosure, real estate owned, and in special servicing.

Chart 1 – Single-Family Rental Rent Change Versus RentRange Year-Over-Year Rent Change

To calculate the rent change across single-borrower, single-family rental transactions, Morningstar isolated the leases starting in a given period and compared the contractual rent in that period with the prior occupied contractual rent. Morningstar then compared this rent change with the year-over-year change in three- and four-bedroom median rents from RentRange. Morningstar weighted the RentRange median rents by geography to match the MSA concentration of the Morningstar single-family rental database.

Chart 2 – Rental Changes for Renewals Versus Vacant-to-Occupied Properties

Morningstar calculated the rent change using the contractual rent for the corresponding period versus the prior occupied contractual rent. To determine the lease expiration sample, Morningstar used the logic outlined in the Tables 5a, 5b, and 5c – Lease Expiration section. Morningstar then looked at the property tape to determine the renewed properties and compared that contractual rent with

the prior contractual rent. For vacant properties subsequently occupied by new tenants, Morningstar isolated those properties that were vacant in a given month and occupied in the next month and again compared the current contractual rent with the prior contractual rent.

Chart 3 – June Average Contractual Rent Versus Property-Level RentRange Estimate by MSA

Chart 3, which shows some of the MSAs most frequently found in single-family rental securitizations, takes a snapshot of the June contractual rents in the Morningstar single-family rental database and compares these rents with their property-specific rent estimates from RentRange.

Chart 4 – MSA-Level Blended Rent Change

Chart 4 shows the blended rent change of some of the MSAs frequently found in single-family rental securitizations. The size of each circle represents the percentage of properties by count in each MSA from Morningstar's database. MSAs in red are below the overall average rent change for the month, while those in blue are above.

Table 3 – Blended Rent Change (by Percentage) – Top MSAs

Table 3 shows the MSA-level blended rent change for the past 12 months using the same rent change calculation used in Chart 1 and Chart 4.

Tables 4a, 4b, and 4c – Month-End Vacancy

Table 4a displays deal-level vacancy by the month-end count of empty properties. Table 4b shows the deal-level vacancy as a percentage of the total properties in each pool. Table 4c shows the MSA-level vacancy percentage for some of the MSAs frequently found in single-family rental securitizations. The vacancy rate is heavily influenced by the number of lease expirations in each month. Generally, the more leases expiring in a given month, the higher the vacancy rate will be. Because each transaction or MSA has a distinct lease expiration schedule, the vacancy rate should not be viewed at one point in time, but rather in the context of its lease expiration cycle, as reported in Tables 5a, 5b, and 5c and as seen in the charts in Appendix I.

Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)

Chart 5 shows the vacancy rate of some of the MSAs frequently found in single-family rental securitizations. The size of each circle represents the percentage of leases expiring in the past three months. MSAs in red are above the overall average vacancy percentage for the month, while those in blue are below. Typically, the more leases expiring, the higher the vacancy rate.

Tables 5a, 5b, and 5c – Lease Expiration

Because lease expiration profiles change over time as tenants renew or new tenants occupy vacant properties, Morningstar seeks to rely on more recently published reporting of lease expirations, rather than solely using the lease expiration schedule from the cutoff date. To determine June lease expirations, Morningstar looks for all June lease expirations in the March property tape. Morningstar looks three months back to set a lease expiration sample that more accurately captures tenants who renew their leases in months before their scheduled lease expiration. Certain issuers have indicated that they proactively work to renew tenants a few months before the lease expiration date. Because Morningstar is looking three months back to determine its sample, there are instances when tenants vacate properties between the time Morningstar determines its sample and the month in which the tenant must make a decision to stay in the property. Morningstar excludes those vacated properties from its lease expiration sample and its retention rate calculation in Table 9. In the current example, properties that become vacant or that have move out dates in either April or May are removed from the June lease expiration count.

Tables 6a and 6b – Historical Months of Vacancy

Tables 6a and 6b show the number of months of vacancy the June unoccupied properties have experienced. In other words, if a property is unoccupied as of the June property tape, these tables summarize the number of total months the property has been vacant since the transaction cutoff date. Depending on the length of performance history, the overall vacancy may be in line with the number of consecutive vacant months, but this might not always be the case for those properties that have gone through multiple leasing cycles. Table 6a shows historical months of vacancy by count, and Table 6b is as a percentage of the June vacancies.

Table 7 – Delinquency Definition

Morningstar's calculation of delinquency is based on the number of properties flagged as delinquent in the monthly property-level data. Each issuer uses its own criteria for classifying a tenant as delinquent. Table 7 summarizes the delinquency definition for each issuer and contains details on the length of time that must pass from a tenant's due date to be considered delinquent. The length of time is either based on a count of 30 days or is based on the calendar month. The slight distinction, for example, either results in a property with payment due on May 1 considered as delinquent after 30 days or as delinquent on June 1. None of the issuers factor a grace period into their delinquency definition, meaning their respective measures of past due begin if payment has not been received by the stated due date. In addition to timing, these conditions can also differ by the total dollar threshold an issuer uses to classify a tenant as delinquent and by the types of overdue payments that the issuer uses to count toward that threshold. For example, most issuers use only base rent to determine the dollar amount of delinquency. However, Tricon American Homes counts total receivables to determine the past due amount. Progress Residential includes certain fees above base rent but not total receivables.

Tables 8a and 8b – Month-End Delinquency

Table 8a shows the month-end count of delinquencies based on the definition in Table 7, and Table 8b shows delinquency as a percentage of the total number of properties in each pool. Any review of delinquency should be viewed within the context of the delinquency definitions in Table 7.

Table 9 – Monthly Retention Rate of Expiring Leases

When evaluating an issuer's ability to keep tenants in a property, Morningstar considers a retention rate. Once again, differences in monthly reporting affect the calculation that Morningstar uses. Typically, a renewal rate would review those tenants who signed a full-term lease. Considering the different methods issuers use to designate tenants with either a renewal or an MTM status, Morningstar opted to report the retention rate instead of the renewal rate. The retention rate is defined as those properties that retained previous tenants, whether on full-term or MTM leases, divided by the total number of leases due to expire in that period, as reported in Table 5a and explained in Appendix II. If there is not enough seasoning in the deal to look three months back to determine the lease expiration sample, Morningstar relies on the cutoff tape lease expiration profile. As a result, the first three months of retention rate reported in Table 9 will use the cutoff tape to find the sample of lease expirations. After isolating the applicable lease expiration sample, Morningstar looks at the most recent property tape to determine the lease status of the properties. In this report, Morningstar uses the June property tape to determine the lease status for May expirations. Morningstar relies on the issuer's labeling of vacant, renewal, new lease, or MTM, to the extent that these notations are available in each tape.

Table 10 – Monthly Retention Rate of MTM Leases

In Table 10, Morningstar reviews the retention rate of those properties in an MTM status. This table looks at previous tenants who went to an MTM status and either renewed or remained in the property on an MTM basis. For the MTM retention rate, Morningstar looks for MTM tenants in the previous month's property tape, and then looks to the current month for their occupancy status. For example, the May 2018 retention rates are the June statuses of May MTM tenants.

Tables 11a and 11b – MTM Tenants

In Tables 11a and 11b, Morningstar shows the count and percentage of properties with MTM tenants. Securitizations with higher concentrations of MTM tenants typically report higher retention rates of their MTM leases. MTM tenants are usually subject to a monthly fee, which may encourage them to eventually sign full-term leases.

Table 12 – Monthly Turnover Rate

In evaluating how effective an issuer is at retaining tenants, Morningstar considers the monthly turnover rate. For this metric, Morningstar strives to apply a consistent calculation given the differences in issuers' reporting. Morningstar considers a property turned over if it meets one of three criteria:

- The property is vacant but was occupied in the previous month and the move-out date, if available, is on or after the first day of the current month;
- The move-out date is on or after the first day of the current month, including the last day of the current month; or
- The property was occupied in the prior month and a tenant has signed a new lease that starts on or after the second day of the current month.

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